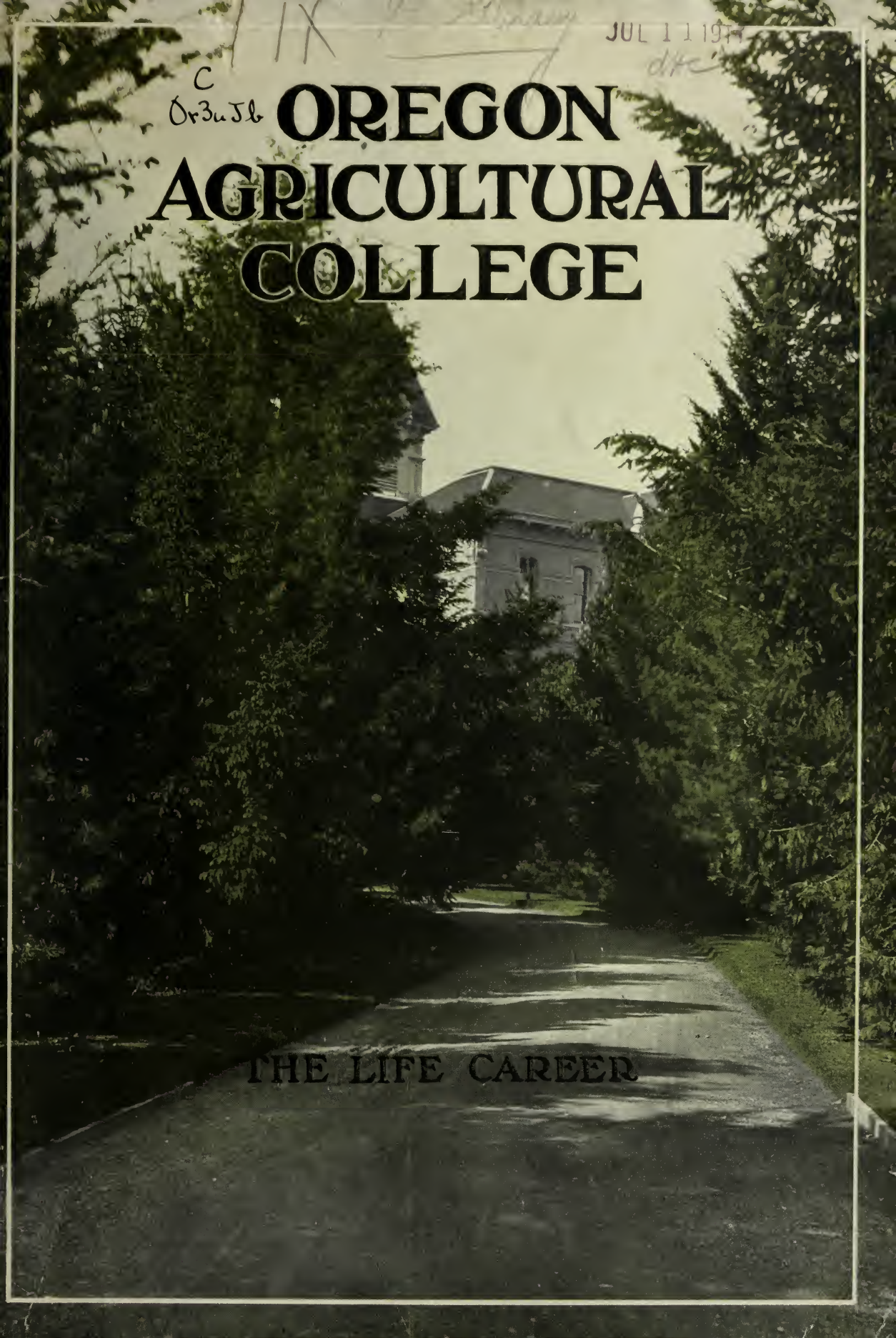
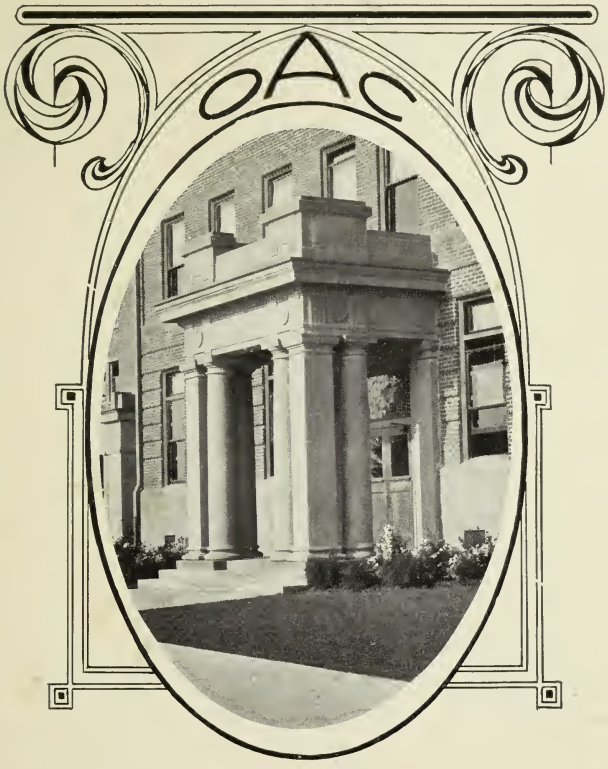
OREGON AGRICULTURAL COLLEGE



THE LIFE CAREER

OREGON AGRICULTURAL COLLEGE

A National and State Institution



Dedicated to the Work of
Enriching Rural Life,
Dignifying the Industries,
Uniting Learning and Labor.

Published by the College

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Foreword

CHOICE OF LIFE-WORK.

"Then there comes the question of the life-work of your Boy. It is here that some of the greatest blunders of parents are made. These blunders are needless because heedless.

"The nature of the Boy has decided, or is deciding, the place in life that he can fill with the greatest satisfaction to himself and others. The natural bent toward this or that occupation is in the Boy. As his father, it is your business to find that bent in his early life. When you have found it, foster it in every legitimate way. Never oppose it by trying to make something else of him.

"Nature has put within your Boy the embryonic qualities of the engineer, the carpenter, the blacksmith, the physician, the lawyer, the merchant, the preacher, the teacher, the farmer—some one of the many occupations of men in life. These qualities you are to discover and aid in their realization. They may run athwart your plans for him, and counter your dearest wishes; but if you are wise, and have garnered anything worth while out of your experience in the world, you will not attempt to force your Boy into some sphere of life-work for which it is apparent he has no natural bent, no aptitude, no earnest desire or thought or enthusiasm.

"You may sincerely desire a reproduction of yourself in your Boy, so far as occupation is concerned, a desire to make him another YOU; and happy are you if nature in the Boy is with you in it. But the blunder of all blunders will be the effort to make him a merchant, or a lawyer, or a preacher, if nature has outfitted him for a farmer, a mechanic, or an artist.

"Study his originality, his initiative. Recognize the personal peculiarities of your Boy in these matters, then cheerfully guide and aid his development along his own leanings.

"If you do not, and you push him or persuade him into some other place, perchance because it anguishes your soul to see the smut of the shop on him, you will see him as a square man in a round hole, or a round man in a square hole—a misfit for life, a sadly pathetic, spoiled life. In the wretchedness of dissatisfied existence, the fret and chafing of it, in its failure of success, your Boy will pay the penalty of your heedless, needless blunder of trying to defeat a natural law. These things have their price, and the price must be paid.

"If your Boy has a natural taste and aptitude for music, do not spoil a successful career in this direction by trying to make him drop it for the tools of a mechanic. It is safer, and far more sane, to let him follow his ambition. Encourage it. If the Boy would rather play with tools than eat, stand by him. Pitch your own notions to the winds, and help him develop his individuality in its own natural direction. The bent of your Boy will reveal itself in one way or another.

"My own Boy wanted one of two things, and the desire came out in a queer way. Getting off a train and walking past the powerful locomotive behind which we had been travelling swiftly, my Boy pulled at my arm and pointed to the cab of the engine, saying: "Up there is where I want to be, papa;" then he added, "or behind the guns in the navy."

"I had altogether different plans and desires for my Boy's future, but thence on, I dismissed them, never mentioned them to him, and willingly helped him to a realization of his desire. I am glad that I did, for he is not a misfit, and has made good.

"History is replete with cases where the father has attempted to take a Boy away from nature and make a misfit of him, and nature has always won out . . . . . It is wise for you to find out which way nature is leading your Boy in the matter of life-work, then cheerfully acquiesce, and help the Boy on his way."—Kenneth H. Wayne, in "Building Your Boy;" By permission of A. C. McClurg & Co., Publishers.

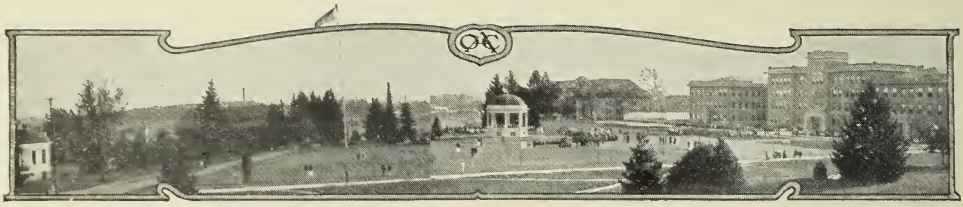
The Life Career

"It is high time that our teachers and leaders of the people understood that every civilized human being gets the larger part of his life training in the occupation through which he earns his livelihood, and that his schooling in youth should invariably be directed to prepare him in the best way for the best permanent occupation for which he is capable. In other words, the motive of the life-career should be brought into play as early and fully as possible."—President Charles W. Eliot.

The Course and the Calling

"When my boy entered college he chose his own field of study. I made no attempt to control his future work by controlling his choice of a college course. All my life I have followed a calling I did not choose. My father was an English sailor, and I wanted to be a marine engineer; but necessity kept me in another field." These are the words of a man, still on the eastern slope of life, who has the reputation of very substantial success in his calling. Yet he regrets the necessity that drove him, as a boy, into the nearest profession and bereft him for good, in spite of subsequent successes, of the youthful training necessary in his cherished line of work. Referring to his son's choice of a college course, he added, "In selecting mechanical engineering, I think my boy chose naturally and wisely."

GLIMPSE OF THE FRONT CAMPUS.



MECHANICAL HALL.

It was the frank assumption of this father that vocation and education are inseparable. It is the assumption of most people who look upon a college education as anything more than a fashion to be observed for the sake of good form. "What are you going to be?", is the question aimed at the youth who starts for college. "What are you studying for?", is the first question exchanged by new acquaintances on the campus.

Vocation and Education Inseparable

Formerly a youth went to college only to study for the ministry, later for the law or for medicine, still later, for finance, for engineering, for bookkeeping, or, vaguely, for journalism. Vaguely; since the youth, after

AN AFTERNOON BAND CONCERT.

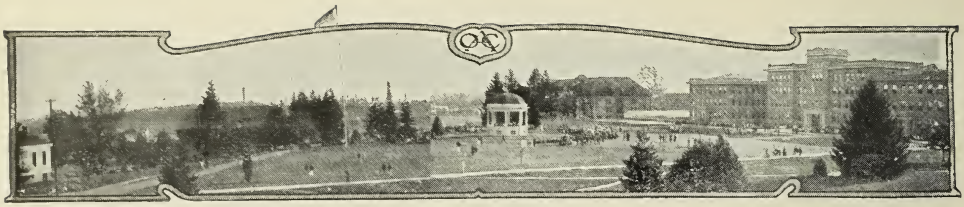
specializing in English for four years, during which he has edited several of the college periodicals, written a college play or two, and contributed verses and short stories to popular magazines, finds himself, at graduation, confronted with this sort of a dismissal by the managing editor of a metropolitan daily: "No, Sir; these are not qualifications. They are disqualifications. They disqualify you for doing the only sort of work that the management of a great daily paper can entrust to its new subordinates."

The Vocations and the Old College Course

This was only yesterday in the history of education. Yesterday, we that did not study law or medicine or general engineering, simply studied for the degree of B. A. or B. S., with the implicit conviction that it was the master-key to unlock any door—an illusion swiftly shattered when we reached the door. We studied books. We dealt in sweet abstractions. We indulged in glad anticipations. Then we drifted about for a year or two while these glad anticipations cooled. Incidentally, we observed that the people engaged in the actual affairs of life studied nature chiefly, and human nature; that they dealt with concrete things—tickets, freight, quarter-sections, log booms, grades, bridges, galleys of type, proof, pigments, stumpage, court calendars, primary elections, range steers, surgical operations—and that, for the most part, they were so happily absorbed in some energizing occupation, bristling with possibilities and radiant with enthusiasm, that they wasted no concern whatever over the tardy fulfillment of any morbid or ill-conceived ambitions, and could little sympathize with those unfortunates whose education had saddled them with a pack of these.

Real Life and Illusions

RETURNING FROM A NOONDAY MEETING IN THE ARMORY



This was yesterday. Today, the young man seeking a higher education can pick out his life career and the college training to fit him for it. He can choose, for instance, to work in the national forest, building trails and marking boundaries, providing fire-breaks, planting seeds for propagating new or different species of trees and grasses, and projecting plans for the most permanently profitable method of handling the timber, and he can find the special training for such interesting services in a School of Forestry. He may aim to enter business, or follow the exacting but polished duties of a private secretary, and he will find the specific training for the technical duties of these vocations, as well as much helpful instruction in the larger problems of the work, in the various courses of a School of Commerce. He may aspire to be an expert machinist, handling the intricate and precise tasks of a worker in iron and steel, a maker of massive instruments as delicate in operation as the poised magnetic needle, and he will find in mechanical engineering exactly the training he desires. He may want to be a horticultural expert, to aid in the development of some potential Eden; to protect the fruit-wealth of an abundant commonwealth from the inroads of disease and the ravages of insect pests; or to engage in the mysteries of propagating new and wondrous fruits, and he will find in the School of Agriculture the extended horticultural training that he needs. He may choose to rear fine horses,

Choices of Vocational Training Today

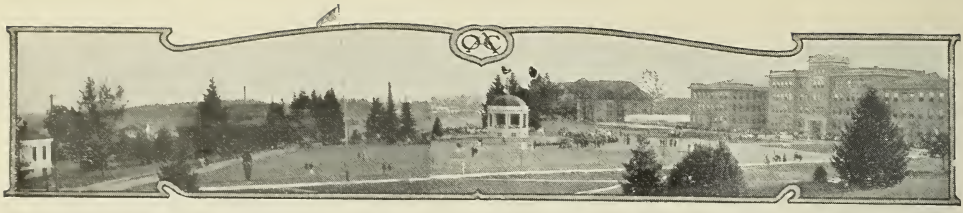
"BAROMETER DAY" AND CONVOCATION.

sheep, or dairy cattle, or learn the varied and responsible duties of farm management, and he will find in the courses in animal husbandry, dairy husbandry, and agronomy such training as will give him both confidence and enthusiasm for such a life career. He may wish to be a veterinarian, practicing the arts of medicine and surgery that save the lives of thousands of the dumb friends of humanity, and he will find in the courses in veterinary science both the theory and the practice to fit him for this humane service. He may have had an insight into the clay industries, and desire such scientific instruction as will enable him to engage in pottery making or to conduct a tile factory, and in the ceramics courses of the School of Mines he will be given the instruction he requires. And thus through a score or more of useful vocations, as they are presented in a progressive land-grant institution like the Oregon Agricultural College.

Such practical instruction as this is already becoming common in the educational centers of the country. Yet the work is only at its beginning. It must be extended and intensified until every one of the leading industries has its representative training school in the organization of the state colleges. In Germany the industrial schools are not only numerous, but they are developed to such a point that they train for a trade as if it were a profession. As a consequence, industrial ideals are high and the rewards of industry are correspondingly constant and satisfying. In the city of Munich, for instance, training in fifty-two trades

Vocational Training an Investment in Human Power

DEAN COVELL ADDRESSING THE "PANAMA" MASS MEETING.



SENIOR TREE PLANTING.

is open to youths who have completed the elementary schools, and facilities for new trades are steadily being added. As new processes are created, a demand arises for utterly new work, and new occupations are born. By keeping abreast of these, the industrial colleges conserve both the wealth and the potential skill of the people; for education of this type is an investment in human power.

The benefits of industrial education to the states and to the community are obvious. Its practical benefits to the student are equally obvious. But its benefits to

TREE PLANTING, CLASS OF 1914.

the very process of the student's education are often overlooked. Yet these are greatest. Absolutely they are greatest. The student who has made his choice of a life career, and has found the training that prepares him for it, has made one of the signal achievements of a life-time. He is no longer a source of anxiety to his parents and his friends; he is henceforth no burden to society. He carries himself; he directs himself. In the clear consciousness of the relation between life and learning, he hungers after education and builds its materials into the growing structure of his ideals.

Superlative Worth of the Life Career Motive

Such a youth is safe in almost any environment. He has a motive; he is occupied. When he selects his college, he does not choose it as the idler chooses a winter resort, for the mere pleasure it will afford him. He chooses it for efficiency, for the training it can give him; and he demands the best.

It Broadens and Intensifies Endeavor

The success of such a student is pretty definitely assured. It is not simply that he sticks to business; but that he makes everything his business that can enrich and broaden the special field of his endeavors. He takes toll of everything that enters his experience, for the upbuilding of his vocational capital. To this end, he levies upon all the arts and sciences; and in doing so he is no smatterer: he is the round-up expert who knows instantly the brand he seeks.

I have heard both the dean and the most experienced professor in the College of Education of one of our great universities of the Middle West declare in public gatherings

MANEUVERING FOR POSITION

that the students who came to them from normal and technical training schools were by far the best students in the university. They knew how to study, because they knew what they were studying for. It is the rule of life. As President Eliot puts it, "All of us adults do our best work in the world under the impulse of a life-career motive." What of the student in the schools? Is it not reasonable, and commendable too, that he should do the same—that he should take a vital interest in his studies in proportion as he finds them of service to his chosen work in life?

The Motive Applies in School as in Life

Here, in fact, is the gist of the whole difference between the great majority of youths who do well, and those who do ill in their life at college. On the one hand, is the youth who has a definite motive, as far reaching and as vital as his life career; on the other, is the youth without an aim, innocent enough in the start, no doubt, and often both brilliant and generous, but ill-directed, negative, and in the end both idle and vicious.

Positive and Negative in College Life

Here is the situation. We separate our young boy from growing fields and noble animals, the healthy discipline of home tasks, and the refreshing uplift of inspiring mountains, to send him to some celebrated seat of learning in the midst of populous cities, and are surprised that on his return he has transferred all his enthusiasms to motor cars and yachts, vaudeville and prima donnas.

SCENES LIKE THIS INVITE THE ANIMAL HUSBANDMAN.

We put the boy in an atmosphere as remote from trade and fruitful toil as the indulgent youths of the Decameron, and then marvel that he does nothing but entertain himself. We isolate him from the prodigious energies of manufacturing and commerce, and the inspiring examples of everyday service in the home and in the community, and are amazed at his embarrassment or contempt in the presence of these specific realities. We send him into the very presence of a dazzling display of wealth and luxury, where liquors are apparently common beverages, and are shocked at the levity with which he looks upon dissipation. We send him out industrious, aspiring, full of a modest confidence in the prizes he has won in local contests, and we get him back indifferent, indulgent, contemptuous of heroic effort, be it either high or humble. Under our breath we curse the boy. But the poor boy is the victim.

The Menace of an Aimless College Life

He is the victim of the fashion for a higher education, regardless of the kind. He goes to college for the same reason that certain people go to the seaside or to the country every summer: it is the custom. And he gets about as much out of the experience. He has not been taught to appreciate the critical issues of life and to seize upon them as they are opportune to the hour. Very naturally, therefore, if he has any volition in the matter, he has picked out the wrong college—the one out of sympathy with industrial utility, with vocational ideals, and the whole imminent problem of practical usefulness and human service. As a consequence, inevitable as the change of tides, he loses both initiative and character.

Where Initiative Wanes

GREEN VALLEYS TO DELIGHT THE DAIRYMAN.

THE NEW MEN'S GYMNASIUM, UNFINISHED.

For the motive of the life career, as it vitalizes the student's work, gives decision also to his character. On this account many of our most responsible leaders in the field of education are advocating the early and vigorous development of this motive in the schools. They have great faith in its effect upon education, based partly upon its pronounced success in Germany, partly upon its convincing progress in Massachussetts,

A GROUP OF PORTLAND AD CLUB VISITORS.

in Gary, Indiana, and other sections of the United States. Yet the movement, chiefly because of two popular objections, still lags. The objections are, first: pupils in the elementary schools, and even students in the secondary schools, are too young to make a final choice of a life career; second, if a foundation of liberal culture does not precede the vocational training, real culture will never be acquired. The slogan of the objectors of the first class is, "Teach the disciplinary studies"; that of the objectors of the second class is, "Postpone as long as possible the selection of your specialty."

Objections to Early Choice of Vocation

As to the first objection, practically all the scientific information that is available, denies it. Of the thousands of boys who have entered the trade schools of Massachusetts, having definitely chosen a trade on entrance, only two per cent have changed their original choice. Out of the fourteen hundred students in the academic colleges of the University of Minnesota in 1912, fully ninety-five per cent had decided upon their life work and were shaping their college courses to that end; while of these, fully two-thirds had made this important choice during their high school course or before. No less than twenty-one per cent, indeed, had chosen their occupations while still in the elementary school. With intelligent vocational guidance in the grades, this proportion would doubtless be trebled.

Yet Early Choices are Usually Final

The truth is, that youths in the later teens need vocational experience. They

AD CLUB VISITORS ENJOYING THE BAND CONCERT

are eager to work with tools, to handle machinery, and to engage in affairs of trade. Too immature to participate in the actual business of life, they are yet keenly alive to instruction in their favored vocations. It is the function of the schools to give this industrial instruction. In doing so, they are performing a double service. On the one hand, they hold back from the industrial world the immature and ill-trained workers, and on the other hand, they vitalize the work of the school and upbuild the resources of its students.

Youths Seek Vocational Experience

As to the second objection, the evidence is almost as clear. Essential culture is identical with human service. No amount of aesthetic appreciation, sealed up in insulated personalities, can outweigh the constructive service of the really competent worker. Postponing the training for a specialty, may doubtless increase the store of knowledge; but it risks, at the same time, that familiar contact with life without which the store of knowledge is almost useless. Many a man is over-educated. He goes on from degree to degree until he becomes so accustomed to academic shades that he dreads the glare of the world. Professor Barrett Wendell used to remark to his classes that there were men in Harvard whom the institution could not wean.

True Culture Needs Human Contact

DANCE OF THE ROSES—1913 PAGEANT.

But there is another phase of the problem, broader, perhaps, than this. It is a question of mental development. Which of two men is in position for ultimate culture and broad outlook—the one who, having taken a liberal education, finds himsel at graduation unfitted for any employment that he is willing to accept, and flounders about for years looking for his "niche," ill-paid and ill-content with his career, or the other, who, having graduated from a particular department of a technical college, immediately enters a trade or profession, for which his training has specifically prepared him, and in which he finds himself immediately competent and immediately self-supporting? Which, at the end of ten or fifteen years, is in position to lead a life of essential culture—the liberal arts misfit, who has come at last into harmony with his environment, or the efficient technically trained man, a leader in his field?

Culture and Practical Success

Is it plausible, moreover, that a man's capacity for culture, for the aesthetic, for the treasures of literature, art, and social service, should cease because he has early acquired a competent foothold in business? Is early youth the only period when a man or woman can look upon beauty with joy and engage in the inspiring struggle for community uplift? On the contrary, is not youth peculiarly a time for zealous pursuit of the crafts, for concrete successes in trade and industry, for substantial progress in material enterprises? And in the same measure, is not the less youthful age the time when the finer appreciations ripen, when the more altruistic

Growth in Years and Culture

YAMHILL COUNTY TEACHERS VISITING O. A. C.

motives prevail, when such treasures as Shakespeare and Emerson, and the glories of Michael Angelo, and the majesty of the Grand Canyon—but lightly regarded in the days of first acquaintance in high school—take hold on the heart at last, making deeds of aspirations, and realities of day dreams? In short, are we not overdoing the steerocube method of imparting aesthetic culture to our youngsters, at a time when their enthusiasms are not ripe for Sesame and Lilies and the Ode on a Grecian Urn, but for tools and typewriters, the clink of trade, and the hum of industry.

I think so. I think the complaint that practical people have been making against our system of public education, is largely a result of this failure to take advantage of the industrial motive at the critical moment in the development of our youths. "To everything there is a season and a time to every purpose under the heavens." Youth is the time for the motor-activities, for concrete interests, and for progress in material things. It is the time when the energies and enthusiasms should be enlisted in the practical side of the vocations, instead of the merely theoretical principles lying behind them. Through acquaintance with these phases of a life work,

"Testing out" for the Vocations

A GLIMPSE OF THE 1913 PAGEANT.

the youth learns to test his genuine preferences; to be cautious of mere fancied interests; to reject outright the choice that proved a passing whim, and to take firm hold of the things that possess his heart.

"The ages between twelve and twenty," declares John W. Alexander, the successful Y. M. C. A. worker, "are the years when the great life choices are made." Then the hopes are virgin, and the initiative is strong. This is the time to choose, to avoid confusion later.

"Usually by the time a boy has reached the age of making a choice," says Francis E. Leupp, in the Outlook, "he is capable of making one, and is reluctant only from indolence or self-distrust. He may never have regarded life seriously, having a vague notion that he is going to be taken care of somehow; he therefore postpones indefinitely the day of settling down." And here comes in the function of the vocational guide—the teacher, the parent, the athletic director, or the social worker, who helps the youth to "come to himself," and to start out on the training that nature seems to have stamped him for. This, of course, is not always easy to determine. But it is just those youths who are wavering in their own convictions that need the most careful attention. It is not the genius whose education the public schools are commonly called upon to fashion; it is the average American youngster, who will lead an average American life. To make him efficient and happy, in one of the great channels of industry along which the bulk of mankind are moving—this is the high but usual task of the industrial teacher, the vocational guide. Occasionally the task is more delicate, and the results more massive and inspiring; for geniuses do

The Field for the Vocational Guide

COMING INTO ACTION

CAPT MERRY AND COMMANDANT HENNESSEY INSPECTING THE LAST COMPANY.

occasionally rise from the public schools, and teachers are agents in their progress.

Triple Service of O. A. C.

In this important work, The Oregon Agricultural College is performing a treble service: it trains youths in its regular College courses for the standard vocations of life; it trains teachers in its courses in industrial pedagogy to carry the industrial message to

CAUTHORN HALL, CLOUDED MARY'S PEAK IN DISTANCE.

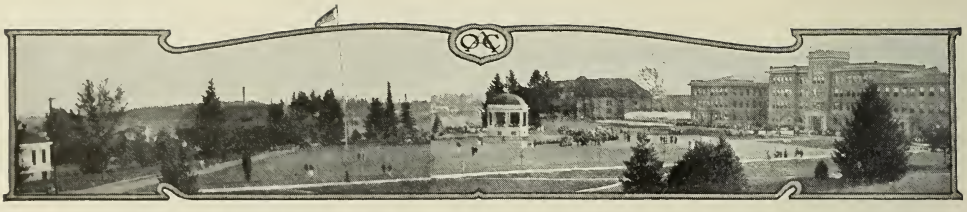
FORESTERS' CAMP.

the schools that may employ them; and it carries to every school in the commonwealth, that will take the steps to start it, the helpful service of the Boys' and Girls' Industrial Clubs.

The Public Interest is Quickening

The importance of this work, in its helpfulness and its magnitude, is being more keenly appreciated from month to month,

CENTRAL FRONT CAMPUS.



THE FIELD WIRELESS

not only by the leaders in industry and education, but by the reading public as well. Books and magazine articles, the product in some instances of years of study and practice in this peculiar field, are quickening public thought into action, until this effort for vocational guidance promises to be one of the most constructive features of the whole industrial movement. Among the magazine articles, several are quoted from in this bulletin. A recent article by Benjamin C. Gruenberg, in the Scientific American, analyzes with careful precision certain successful experiments in vocational guidance.

"In cooperation with employers and with the school system," says Mr. Gruenberg, "this form of social service is rapidly assuming a prominent place in the activities of a progressive community. The business man who wanted the schools to give him ready made office boys and machine operators may find that he can help the schools to give him something even better. The school man, who was naturally suspicious of the clamor for 'industrial education', may find that it is possible to reorganize the school to meet the new demands without losing any of the ideals for which he has stood—indeed, with a good prospect of strengthening the hold of his ideals upon the whole community.

Why Children Leave School

"Surveys made in several cities during the past four or five years have brought out the fact that much of the drifting and floundering among the standard vocations can be charged directly to the schools. This is true not because the schools have been inefficient in doing their special work; on the contrary, they have been increasingly efficient in this work for many years past. But the schools have been remiss in that they have not with sufficient alacrity adapted themselves to the changing conditions of social and economic life. Nearly three-fourths of the children who leave school when the law allows, do so not because of direct economic pressure in the home,

but because the school has lost its grip upon the children. This is to be explained by the fact that the schools continue to give to all the children just that particular pabulum which was satisfactory a generation or two ago to a small fraction—a selected fraction—of the children. But the mass of the children are different from that selected fraction in just this, that they are thing-minded, motor-minded, not word- or symbol-minded, like their teachers."

Chief among the books on the subject, especially as a hand-book for teachers and parents, is "Vocational Guidance," by J. Adams Puffer, Director of the Beacon Vocational Bureau, Boston, and author of "The Boy and His Gang". In this book the author develops the fact that, "What we need is emphasis on the producer, that shall dignify home work, agriculture, and the mechanic arts, and make every boy and girl feel how necessary and how worthy is the task to which he looks forward." He argues, in general, for the dignifying of agricultural pursuits, the skilled mechanical trades, and business, sounding a warning against the clerical pursuits and the crowded learned professions. "The farmer," he says, "though he works long and hard with his hands, belongs in his social affiliations with the business and professional castes rather than with the so-called 'laboring classes.' He does not, like the mechanic, learn his trade once for all and then go on repeating himself for the rest of his days. Rather, is he, on the contrary, like the surgeon, explorer, engineer, surveyor, geologist, sculptor, essentially a brain worker despite strong muscles and skilled hands." This being true, the farms cannot be intelligently handled by other than competent husbandmen, preferably native to the soil, who devote their life energies to the work.

Emphasis on the Producer

GOVERNOR WEST AND THE INSPECTION STAFF

Discussing the mechanic arts, he says concerning the city's problem, "In a very real sense, then, at the present time and in this country, the whole problem of vocational guidance in the city focuses on this group of high-skilled

mechanical workers. Our object should be, in general terms, to bring up into it from below every promising boy or girl who has a reasonable chance to 'make good' in it, to swing across from the clerical vocations, on the same level all the boys and girls whose predilections are not clearly on the clerical side, and to hold back from the business and professional group such persons as seem to aspire beyond their possibilities. This is the hole in the industrial system that needs to be filled. These also are the productive workers who add especially to the world's wealth."

The City's Problem

Concerning the learned professions as prospective fields of labor, he says, "Truth is, the professions in America are scandalously overcrowded. In 1890 there was one lawyer to each eight hundred persons, children included; in 1900, one to each six hundred and fifty; in 1910 the number had grown to one for each five hundred. Of doctors, there is one to every six hundred potential patients, of whom, obviously, even during an epidemic, only a small number are ever sick at the same time. . . . In general, the proportion of American men and women in the professions is about twice as large as, for example, in Germany. And there is no dearth there!" Continuing this discussion, he declares that while the prizes in some of the professions are high, they are few in proportion as they are high, and that the average professional man in the United States, ten years or more after completing his formal education, does not make more than $1,500 a year. Yet even in the face of such facts, the overcrowding still goes merrily on; in the vocational survey of the University of Minnesota already referred to, fifty per cent of the choices of all the academic students were for either law or medicine. No wonder, then, that Director Puffer concludes his comment on the professions by such pointed rules as these for the vocational guide: "First, warn everyone against entering the professions. Second, swing as many as possible of those who persist from the older, 'learned' professions to the newer, useful professions."

The Overcrowded Professions

ON TIME FOR CONVOCATION—PRESIDENT KERR AND MR. LINCOLN STEFFINS.

Emphasis on the producer, the homemaker; on agriculture, and the mechanic arts; on the newer, "useful" professions! —these are exactly the functions of the state

agricultural and mechanical colleges; they are exactly the functions that the Oregon Agricultural College has been performing for the thirty years or more of its history. How this is being done, in the twelve degree courses and the six vocational courses now offered regularly as the curriculum of the College, is indicated briefly in the section of this bulletin entitled Schools and Departments. In the meantime, a word about the life of the College community, as affected by the vocational ideal.

A peculiarity of the agricultural and mechanical colleges, strikingly testifying to the invigorating moral worth of the life-career motive, is their high appreciation of the robust virtues—temperance, clean habits, industry, and reverence. This is conspicuously true of the Oregon Agricultural College. An atmosphere of essential purity (quite distinct from mere prudery), inherent in the very childhood of the soil, is prevalent in the social life of the College. The use of liquor is effectually tabooed. Through a tradition, voluntarily instituted by the students and maintained by them from year to year, smoking by College men is not tolerated on the campus. Strangers sometimes invade the sacred precincts with weeds alight, but the fact betrays them as aliens. Students and faculty never do. Traditions such as

A Healthy Social Atmosphere

COLLEGE GREENHOUSES.

these, together with the bracing influence of self-government by the students, help to keep the College life on a high and stimulating level.

Along with this, is a hearty zeal for all athletic sports; for the comradeship and discipline of service with the cadets; for fetes, and convocations, rallies, class balls, hall parties, mountain jaunts, and forest picnics. Wholesome mirth and recreation, as well as hard work and searching study, are characteristics of the College students. But their sport is a community labor. It is no idling away of time. It is prevised with elaborate plans and anticipations; and involves an unselfish emulation. A more beautiful and ingenious scheme of entertainment; a more entrancing afternoon of music, games, or spectacles; a more gracious hospitality; a more brilliant or informing drama; or a more gorgeous "Ag." Fair, or Engineering Show,—these are the motives that actuate their play. For their play is like their work: it has an aim. Indeed, they seem to believe, with Brinton, unconsciously perhaps, that, "The measure of the value of play is the amount of work there is in it; and the measure of the value of work is the amount of play there is in it."

A Wholesome Enjoyment of Sports

A STUDENT "RALLY."

The test of the efficiency of any college is the citizenship of its alumni. The Oregon Agricultural College is proud of the records of its graduates. While any tabulation of the results of their achievements must necessarily be inadequate, since personal influence cannot be gauged in numbers; yet the following classification of their fields of labor is suggestive of the versatility of their vocations. Of the approximately 1500 graduates, 301 are housewives, 105 farmers, 109 engineers, 104 teachers, 50 pharmacists, 39 electricians, 37 business men, 36 professors, 27 attorneys, 23 agricultural experts, 19 stenographers, 16 miners, 16 merchants, 13 physicians, 12 foresters, 12 public officials, 12 clerks, 569 variously distributed through such vocations as journalist, architect, milliner, bank president, publisher, nurseryman, advanced student, etc.

Vocations of Alumni

The alumni are distributed principally as follows: In Oregon, 813; in California, 71; in Washington, 69; in Idaho, 28; in New York, 13; in Canada, 6; in India, 6; in Massachusetts, 5; in the Philippines, 4; in Montana, 4; in Michigan, 4; in Illinois, 4; in North Dakota, 3; in Alaska, 3; and in Arizona, 3.

FORESTRY STUDENTS CRUISING TIMBER.

The alumni association of the College, with headquarters in Portland, is a progressive and dynamic organization, under the leadership in 1913-14 of the following officers: Charles F. McKnight, '98, President; Charles C. Thompson, '11, Vice-President; John H. Gallagher, '00, Secretary.

The following list of alumni, representing the different schools, is not offered as an adequate summary of the graduates of the College in the various vocations of life. The list has been hastily compiled for the sake of suggesting to prospective students, or others interested in the College, the names of those who may well serve both as specific examples of the practical application of a technical education, and as sources of authentic information regarding the training offered at the College. None of the men and women whose names appear here has been consulted with respect to the publication of this list. Doubtless any of them who might have been consulted would have suggested other names than their own.

List of Alumni

GRADUATES OF THE SCHOOL OF AGRICULTURE

Walter Carlton Abrams, '00; Business Manager of the "Pacific Homestead" and "Oregon Poultry Journal." Member of Governor's staff.

Edwin Burton Aldrich, '00; Editor of "East Oregonian," of Pendleton, Oregon.

Ralph Wilmer Allen, '07; Superintendent of the Branch Experiment Station at Hermiston, Oregon.

ORANGE "O" CLUB

Albert A. Asbahr, '11; Teacher of Agriculture, Pendleton High School.

Lee Beall, '95; Merchant and political leader, Lake View, Oregon.

Samuel L. Bennett, '07; Orchardist, Medford, Oregon.

Ralph Billings, '02; Farmer, Ashland, Oregon.

Ralph Blanchard, '13; Entension Service of the Montana State Agricultural College, Bozeman, Mont.

Daniel Harvey Bodine, '98; Sheriff of Linn County.

Arthur George Bouquet, '06; Assistant Professor of Horticulture, O. A. C.

LeRoy Breithaupt, '10; Superintendent of the Harney Branch Experiment Station at Burns, Oregon.

Renton K. Brodie, '08; Instructor in Chemistry, O. A. C.

Frank Ross Brown, '10; Assistant in Horticulture, O. A. C.

Sheldon C. Brown, '96; Fruit Grower, Zillah, Washington.

Claude Buchanan, '03; Farmer, Corvallis.

Arthur Buchanan, '96; Farmer, Corvallis.

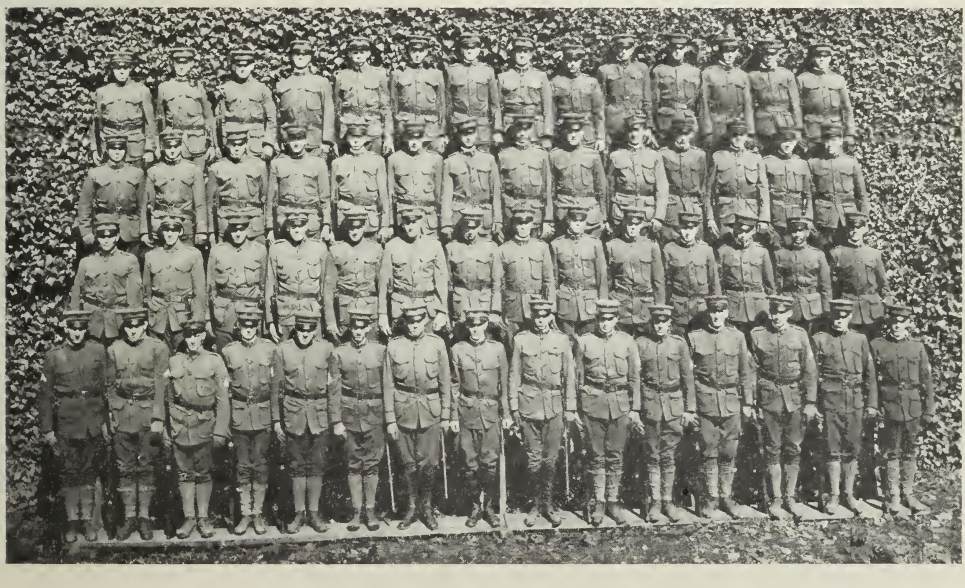
John G. Buchanan, '89; Farmer, Corvallis.

Austin T. Buxton, '95; Ex-Master of State Grange; Farmer, Forest Grove.

Claude C. Cate, '04; County Advisor, Union County, LaGrande.

Bliss A. Clark, '10; Orchardist, Hood River.

C. C. Clark, '07; Manager large orchard company, Kamloops, B. C.



ONE OF THE TWELVE CADET COMPANIES

James H. Collins, '88; County Clerk, Rainier.

Thomas Harrison Crawford, '74; Judge and Attorney, LaGrande.

H. C. Cunningham, with Kern County Oil Company of Palo Alto, Cal.

Harvey W. Currin, '09; Manager large orchard company, Drain.

John Cleve Currin, '08; Superintendent Oaco Orchards, Monroe.

Ernest W. Curtis, '13; Research and Extension Worker, Truckee-Carson Experiment Farm, Fallon, Nev.

Geo. W. Denman, '93; Municipal Judge and Attorney, Corvallis.

C. C. Dickson, '10; Dairyman, Shedds.

J. B. Dobbin, '09; Farmer, Union, Oregon.

Frank E. Edwards, '95; Director, California Polytechnic School, San Luis Obispo, California.

Fred A. Edwards, '99; Farmer, Mayville, Oregon.

Otto Herman Elmer, '11; Extension Work, U. S. Department of Agriculture, Mulino, Oregon.

John Fulton, '92; Professor of Chemistry, O. A. C.

John H. Galligher, '00; President Cowlitz Bridge Co., Portland.

Carl F. Galligan, '10; Manager, True to Name Nursery Co., Dufur.

W. J. Gillstrap, '98; Physician and Surgeon, Sheridan, Oregon.

F. L. Griffin, '08; Associate Professor of Agricultural Education, State Leader in Boys' and Girls' Club Work, O. A. C.

S. B. Hall, '09; Head of Agricultural Department, Gardenia high school, California.

O. B. Hardy, '11; Manager large ranch, Bend, Oregon.

Frank Harrington, '13; U. S. Department of Agriculture, Washington, D. C.

MARION COUNTY TEACHERS LUNCHING UNDER THE TRYSTING TREE.

Bird N. Hawley, '11; Manager certified dairy.

Chas. H. Hayes, '08; Farmer, Sherwood.

Harry Hetzel, '13; Instructor in Iowa State College, Ames, Iowa.

W. F. Herrin, '73; Vice-President, Southern Pacific R. R. Co., Flood Bldg., San Francisco, California.

Mr. J. R. Howard, '04; Stockman, Terrebonne, Oregon.

McKinley Huntington, '12; Farmer, Yoncalla, Oregon.

C. L. Johnson, '92; Professor of Mathematics, O. A. C.

M. R. Johnson, '96; Manager North Biscuit Co., Portland.

E. J. Lee, '98; Assistant Professor of Nutrition, University of California.

J. C. Leedy, '12; Teacher of Agriculture and Assistant County Advisor, Burns, Oregon.

Raymond S. Loosley, '11; Dairyman, Fort Klamath, Oregon.

A. G. Lunn, '12; Assistant Professor of Poultry Husbandry, O. A. C.

Harvey L. McAlister, '97; Farmer, Lexington, Oregon.

M. A. McCall, '10; County Advisor, Klamath Falls.

R. A. McCaully, '09; Orchardist, Hood River.

William W. Masters, '82; Secretary and Attorney, Pacific Title and Trust Company, Portland.

E. J. Newton, '96; County Clerk, Benton County.

Wintha R. Palmer, '09; Assistant Professor of Horticultural Extension, Purdue University.

Knight Pearcy, '12; Superintendent large orchard company, Salem, Oregon.

Bert Pilkington, '05; Assistant Chemist, O. A. C.

Ralph Waldo Rees, '10; Assistant Professor of Horticultural Extension, Massachusetts Agricultural College, Amherst.

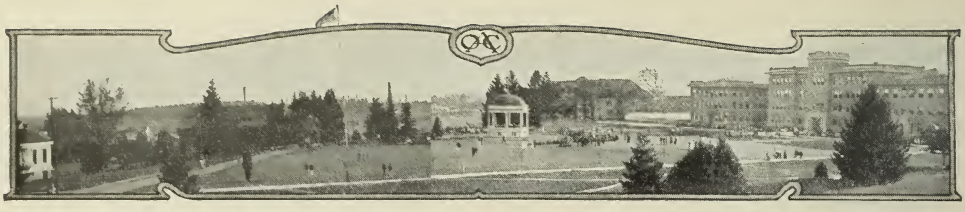
George Reiben, '11; Teacher of Agriculture, Ferndale, California.

Claude Schrack, '09; Superintendent large orchard company, Sutherlin, Oregon.

Richard W. Scott, '92; Farmer, Inavale, Oregon.

O. G. Simpson, '05; Assistant Professor of Dairying, O. A. C.

JOYS OF THE SENIOR EXCURSION TO THE BEACH



John E. Smith, '02; Instructor in Geology, University of North Carolina, Chapel Hill.

H. V. Tartar, '02; Associate Professor of Agricultural Chemistry and Chemist of the Experiment Station, O. A. C.

C. D. Thompson, '86; Orchardist and county school superintendent, Hood River, Oregon.

C. C. Vincent, '07; Professor of Horticulture, University of Idaho.

James K. Weatherford, '72; President Board of Regents, Attorney, Albany.

I. P. Whitney, '05; Superintendent of Waikiki Farms, Spokane, Washington.

William H. Wicks, '04; Professor of Horticulture.

Robert V. Williams, '09; Chemist, U. S. Navy Yard, Bremerton, Washington.

F. R. Withycombe, '01; Superintendent Eastern Oregon Experiment Station, Union, Oregon.

George S. Zimmerman, '10; Farmer, Yamhill, Oregon.

GRADUATES OF THE SCHOOL OF ENGINEERING

Meigs Bartmess, '04; Westinghouse Electric Co., Pittsburg, Pa.

Thomas Bilyeu, '02; Inventor and Engineer, Portland, Oregon.

L. B. Chambers, '08; First Lieutenant in U. S. Coast Artillery.

H. C. Cunningham, '10; Conservation (oil and oil producing department) of the S. P. Railroad Co.

H. K. Donnelly, '09; Engineer with the State Engineer.

F. H. Gallagher, '00; President and General Manager, Cowlitz Bridge Company, Portland, Oregon.

J. G. Garrow, '00; Assistant City Engineer, Portland, Oregon.

C. T. Parker, '08; Vice-President and General Manager, Oregon Engineering & Construction Co., Oregon City, Oregon.

[THE] MASK AND DAGGER CLUB

Joseph Paulson, '03; Manager Sales department, General Electric Co., Atlanta, Georgia.

E. R. Shepard, '01; Assistant Professor of Electrical Engineering, O. A. C.

W. P. Webber, '09; Engineering department of U. S. Reclamation Service.

GRADUATES OF THE SCHOOL OF HOME ECONOMICS

Rae Atherton, '12; Teacher, Albany, Oregon.

Alice Butler, '14; Teacher, Pendleton, Oregon.

Marie Cathey, '13; Teacher, Sutherlin, Oregon.

Maribel Cheney, '14; Teacher, Prineville, Oregon.

Helen Cowgill, '13; Teacher, Burns, Oregon.

Lucy Crawford, '13; Teacher, McMinnville, Oregon.

Ruth Corbett, '12; Teacher, Newberg, Oregon.

Mrs. Delia Dentler, '94; Housewife, Baker, Oregon.

Bertha Davis, '89; Instructor Domestic Science, O. A. C.

Belle Edwards, '11; Teacher, La Grande, Oregon.

Bertha Edwards, '10; Teacher, Salem, Oregon.

June Gray, '13; Teacher, Ontario, Oregon.

Edna Groves, '98; Teacher, Domestic Science, Washington High School, Portland, Oregon.

Grace Hobbs, '13; Teacher, Eugene, Oregon.

Mary Hartung, '13; Teacher, Springfield, Oregon.

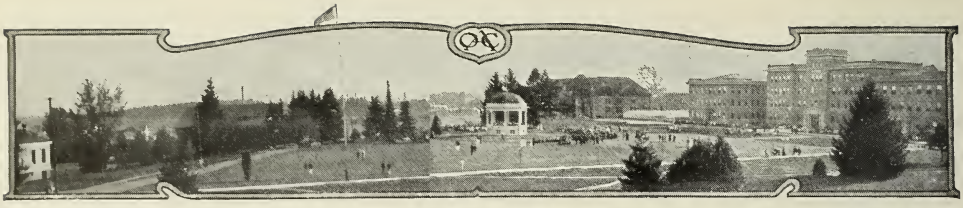
Esther Hartung, '14; Teacher, Glendale, Oregon.

Hazel Holt, '14; Teacher, Coburg, Oregon.

Vera Haskell, '11; Teacher, Portland Trade School, Portland, Oregon.

Mrs. Clara Harding, '73; Housewife, financier, San Diego, California.

BASKET BALL TEAM.



Alice Horning, '82; Teacher, Hood River, Oregon.
Charlotte Huff, '12; Teacher, Enterprise, Oregon.
Mrs. Laura Korthauer Ireland, '87; Director of Music, Public Schools, Bellingham, Washington.
Agnes Johnston, '12; Teacher, Oregon City, Oregon.
Mrs. Emma Laurence Jones, '93; Housewife, Oregon City, Oregon.
Carrie Lyford, '96; Director Domestic Science, State Normal, Rock Island, Illinois.
Genevieve Lyford, '99; State Normal School, Valley City, North Dakota.
Lottie Milam, '14; Teacher, Klamath Falls, Oregon.
Christie Moore, '12; Columbia University Graduate Work, New York City.
Mrs. Barbara Moore, '12; Graduate Work, Pratt Institute.
Margaret Morehouse, '13; Teacher, Astoria, Oregon.
Alice Pimm, '12; Teacher, Falls City, Oregon.
Carrie Pimm, '11; Teacher, Eugene, Oregon.
Delia Purves, '13; Teacher, Hillsboro, Oregon.
Clare Pierce, '12; Teacher, Union, Oregon.
Emily Rogers, '10; Teacher, Washington High School, Portland, Oregon.
Juanita Rosendorf, '04; Graduate student, Columbia University, New York City.
Winnie Shields, '14; Teacher, Sitka, Alaska.
Dorothea Steusloff, '13; Teacher, McMinnville, Oregon.
Ruth Smith, '11; Instructor, Domestic Science, O. A. C.
Mary Sutherland, '04; Teacher Domestic Science, Pullman Agricultural College, Washington.
Emma Ueland, '13; Teacher, Tillamook, Oregon.
Clara Wallan, '12; Teacher, Milton, Oregon.

GRADUATES OF THE SCHOOL OF COMMERCE

H. B. Auld, '06; Manager Benton Co. Abstract Co., Corvallis.
R. D. Bridges, '11; Merchant, Oakland, Oregon.
P. H. Cale, '09; Attorney, Detroit, Michigan.
R. C. Cockran, '12; Teacher, Salem High School, Salem.
Pearl Horner, '09; Teacher, Dallas High School, Dallas.
Vera Horner, '07; Teacher, Roseburg High School, Roseburg.
J. E. Kerr, '09; Attorney, Detroit, Michigan.
Gertrude Walling; Teacher, High School, Springfield.
Angie Kyle, '11; Bank Clerk, Monroe.

E. R. Libner, '11; Bookkeeper, Interstate Commerce Commission, Washington, D. C.
Iva McGinnis, '11; Teacher, Corvallis.
F. E. McFrew, '10; Mgr. Drug Store, Portland, Ore.
Fred McHenry, '09; Deputy County Clerk of Benton County, Corvallis.
F. L. Michelbook, '09; Mgr. Implement Co., McMinnville, Oregon.
H. M. Roberts, '10; Sec. Portland Ad Club, Portland, Oregon.
J. G. Schroeder, '08; Attorney, Portland, Oregon.
M. E. Snead, '11; Sec. Portland Commercial Club, Portland, Oregon.
E. B. Stanley, '10; Principal High School, Fossil.
R. L. Stoneburg, '12; Ass't Business Office, O. A. C.
A. V. Swarthout, '12; Registrar, Willamette University, Salem, Oregon.
C. E. Williamson, '08; Bookkeeper, First Nat'l Bank, Albany.
E. B. Williamson, '09; Ass't Cashier, Albany State Bank, Albany.
E. J. Montague, '13; Ass't Sup't Experiment Station, Hays, Kansas.
E. B. Lemon, '11; Instructor, O. A. C.

GRADUATES OF THE SCHOOL OF FORESTRY

Harold H. Barbur, '11; with Eastern & Western Lumber Co., Portland.
H. J. Eberley, '11; Oregon State Forest Service, Salem.
Adolph Nilsson, '11; Federal Forest Service, Portland.
F. E. Pernot, '11; Entomologist, Federal Forest Service.
J. F. Pernot, '10; Specialist in the study of insect-infested timber.
Fritz Raithel, '11; timber cruiser, Seattle.
T. J. Starker, '10; Federal Forest Service.
S. J. Wilson, '10; with Woodard & Clarke Wholesale Drug Co., Portland.

Schools and Departments

School of Agriculture

The distinguished success of schools of agriculture throughout the country today is due largely to the fact that they were among the first to respond to the revolutionary demand of the last decade that the object of public education shall be to fit students for the duties, the necessities, and the opportunities of life. Until the last ten or fifteen years, the public schools were falling considerably short of this ideal, and their students, on entering life, had little knowledge of the vocations they must pursue, little interest in the industrial realities about them, and an attitude toward the "bread-and-butter" side of life that was not only artificial or indifferent, but positively supercilious. Educational institutions in general insisted too much on the cultural side of training and too little on its utility, losing sight of the truth expressed by Emerson that the beautiful rests on the foundations of the necessary.

Schools of Agriculture are succeeding in applying the touchstone of utility to education. They are acting on the theory, almost everywhere accepted today, that the school's first duty is to prepare the student to earn a living; that food must precede culture. They are not seeking the cheap rewards of immediate success, however, at the expense of "blind alley" careers or ultimate stagnation. They are combining the fundamental lessons of science with the practical demonstrations of skilled methods of business. Permanent prosperity, springing from a conserved natural wealth, from a restored soil fertility, from an intelligent policy of animal husbandry or dairying, from approved practices in horticulture or agronomy, and from the employment of systems of farm accounting—this is the substantial aim of the School of Agriculture.

TILING A FIELD, INCREASING ITS EFFICIENCY.

COOPERATIVE SEED TESTING LABORATORY

Agronomy

The Department of Agronomy deals with the science of the fields, and the crops of the fields. It offers instruction in (a) Soils: their origin, structure, fertility, cultivation, and improvement; (b) Field Crops: their history, growth, culture, improvement, and value; (c) Irrigation and Drainage: the principles and methods of land drainage; the handling of land under irrigation; (d) Farm Mechanics: practical methods and systems for the operation of the farm under different conditions as a permanent money-making business.

Instruction in all courses consists not only of class and laboratory work, but of field work as well. Theory is constantly supplemented and tested by practice. For this double function, the equipment of the College—in its substantial Agronomy building, with its modern laboratories and department facilities, and its exclusive Farm Mechanics building supplied with the best farm machinery, together with the fields and platted acres of the Station farm—is admirably adapted, one of the most complete, in fact, in the country.

Students trained in this department of the College are given efficient practical help in preparing themselves for many of the specialized callings not open to the average worker. Among these are such special vocations as that of the seed tester, soil examiner, operator of steam or gasoline tractor, tender of a separator, manager of a farm, crop buyer, special demonstrators of fertilizers, farm machines, etc.; experts in charge of installing drainage systems for farms, leveling and preparing lands for irrigation, and selecting field crops for farmers; as well as collaborators in grass, cereal, statistical, and other investigational work. All such duties as these have been efficiently performed by many of our more responsible students, even before they have completed their undergraduate work.

Graduates of this department, however, are prepared for even higher and more responsible functions. A considerable number of them at present enter upon agricultural extension work, a field of effort that is now being emphasized by universities and colleges throughout practically the entire country. Some of them take up agricultural experimental work, either in connection with educational institutions or with private interests; while others become rural school supervisors, teachers in high schools, or assistants in normal schools, colleges, and universities, where the demand for instructors specially trained in scientific agriculture appears to be steadily increasing.

They are qualified to serve as specialists in fertilizers or machinery for large companies; as inspectors of seed farms for seed dealers; as consulting agriculturists for railroads, smelter companies, chemical companies, water power companies, and others desiring to improve the agriculture of the country, or to avoid litigation by demonstrating that their by-products do not injure agriculture on neighboring lands.

Graduates of agronomy courses, who have had in addition, as is usually the case, practical experience in farm life, are sought for as consulting specialists in soils, crop production, farm management, drainage, and irrigation.

They are also prepared for work in the United States Civil Service in such departments as the following: Forage crop specialists, Grazing problems, Soil Survey, Farm equipment, Dry farming, Irrigation farming, and similar types of government investigation.

AGRONOMY

Animal Husbandry

The winning of satisfaction and content in daily work is the most fundamental of all objects for an industrial democracy. Unless this satisfaction and content can be habitually won on an immense scale, the hopes and ideals of democracy cannot be realized. Therefore joy in work should be the all-pervading subject of the industrial discussion; for it is at once motive, guide, and goal.—President Charles W. Eliot, in World's Work.

The department of Animal Husbandry is concerned primarily with all the problems relating to the production of various kinds of live stock including horses, hogs, sheep, goats, and beef cattle, but excluding dairy cattle. The different phases of the work include a study of the scientific principles of heredity as applied to the breeding of live stock; the most approved farm practices in breeding and feeding of live stock; the principles of animal nutrition; the judging of all kinds of live stock; the history, development, and characteristics of the various breeds; and the incidental problems in the general management of live stock. Realizing that the raising of live stock is in actual practice more commerce than science, the department makes a special effort to keep its students in touch with the commercial side of the industry.

The larger portion of the students in the Animal Husbandry department intend and desire to go back to their farms and engage in the actual raising of live stock. Its graduates are found, therefore, scattered throughout the West, engaged in the various forms of stock raising. Some are raising sheep, others hogs, others cattle and horses. One is raising pure bred Belgians, another pure bred Berkshires and Jerseys, another is making a business of buying and shipping stock, another is handling sheep in the Stock Yards at Portland, another has charge of the fattening of several hundred steers in Central Oregon, another is raising beef cattle on the range, while others are engaged in various forms of general farming and live stock.

Most of the Animal Husbandry students have a very strong liking for live stock, and on that account it is difficult to get them into any sort of professional work. Animal Husbandry graduates, however, are qualified for the various forms of special teaching in such institutions as high schools and colleges, for experimental investigation, and for various forms of extension service along live stock lines.

The successful Animal Husbandryman must have business ability. Without this, it is impossible for him to succeed. With this qualification, however, he can select his own location. We find our graduates in the city of Portland, on the small high-priced farms near that city, on the farms around Corvallis, in Southern Oregon, in the mountains of Coos county, in the overflow districts of the Columbia River, in the irrigated valleys of Eastern Oregon, and on the sage brush plains of the interior, to say nothing of those who wander outside the state and scatter from California to Canada.

As a field for the live stock industry, in its various phases of development, Oregon offers such inviting opportunities that the business promises to advance in even greater measure than has marked its growth in recent years. Both the climate—varied and without extremes— and the agriculture—versatile and abundant—give the state an array of natural advantages scarcely paralleled in the most fortunate localities. These advantages, coupled with an ascendant interest in high grade live stock, together with the conspicuous successes of various stock raisers throughout the state, are fraught with splendid possibilities for the future. The trained Animal Husbandryman, therefore, will find from year to year a larger field for his activities, and a demand for his services even more insistent than at present.

ANIMAL HUSBANDRY.

Dairy Husbandry

We also need to discard forever the notion that there is something vulgar about the useful and the serviceable. After all is said to discredit the 'bread and butter' motives, it is no moral or philosophical objection to a discovery or a field of knowledge that it has useful applications.—President Charles W. Eliot.

If either of my sons had lived and I had trained him, as I should have tried to do, to be a great and good farmer, I should have wanted to send him at least six months to a business college to give him the aptitude and habits and forms of a thorough business man.—Horace Greely.

Take our country through, there is no doubt that we have this great advantage of a new country. So long as every man may have his own farm by going and taking it, the habit or tendency of young men will be to establish themselves, instead of living in what they regard dependence.—E. E. Hale.

The Pacific Northwest is peculiarly adapted to dairying, and the rapid growth of this industry is creating splendid opportunities for young men in the various phases of the vocation. The College dairy building and its equipment, moreover, have been thoroughly remodeled and brought up to the point of highest efficiency. The dairy herd has been improved, also, and will be further improved this year until it contains groups of the leading dairy cows.

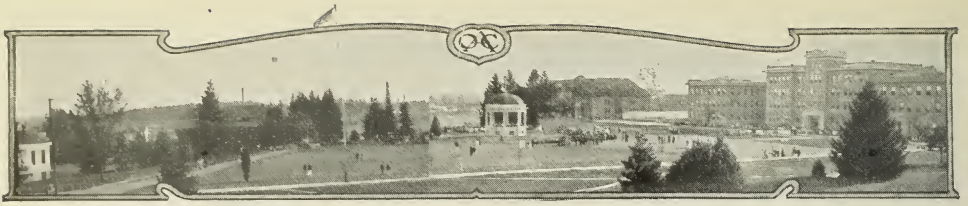
Next year the Dairy department will offer a four year course in dairy manufacturing and dairy production. The Dairy Manufacturing course will fit the student for such positions as managers of creameries and cheese factories, positions which not only afford good salaries but opportunity for development of community leadership as well. The course will fit students, also, for professional buttermakers, positions that offer opportunities for advancement for capable men; for instruction in research work in colleges and experiment stations along dairy manufacturing lines; for inspectors of dairy products and dairy establishments in city, state, or government service; and for positions in field or research work in the United States Department of Agriculture.

The Dairy Production course will qualify men for positions as managers of large commercial dairy farms or as breeders of pure bred dairy cattle; for county advisory positions; for city milk inspectors; for managers of milk plants, for college and experiment station work; and for field and research work in the United States Department of Agriculture.

These courses are so arranged that a student may major in one course and yet elect enough of the other course to enable him to have a working knowledge of that phase of the industry.

The department also offers a one year course which is designed to fit students for positions as operators of creameries and cheese factories, managers of dairy farms, or supervisors of cow-testing associations.

DAIRY HUSBANDRY



Horticulture

When the schools bridge over the gap which the apprentice system once filled, it will no longer be true that only one quarter of the boys who leave school before the end of the grammar course find steady and improving employment—J. Adams Puffer, in Vocational Guidance.

The work in the division of Horticulture is divided into six distinctive courses:

Pomology. This in turn is divided into three definite units: First, plant propagation and nursery work, which makes a study of the propagation of plants, and helps to fit students for nurserymen, if they so desire; second, fruit production, which has to do with such problems as pruning orchards, setting out trees, tillage, irrigation, use of cover crops, fertilizers, and anything which has to do with the production of all classes of fruit, including the pomaceous fruits, small fruits, and even sub-tropical fruits; third, handling the fruit crop, such as handling, picking, packing, pre-cooling, cold storage, transportation, marketing, etc.

Vegetable Gardening. This course gives the student an idea of the outside work in vegetable gardening, either for the home garden, truck garden, or the market garden. On the other hand, it gives him special training in the greenhouses to fit him as an expert along such lines.

Landscape Gardening. This course gives the student training for the landscape gardening of the home and public buildings, but gives him also, if he so desires, a foundation for the work as a professional, as city landscape gardener, park superintendent, or professional landscape gardener.

Floriculture. This course gives the student special training in the production of flowers under glass. Some special work is given for the young man or young woman regarding the use of floriculture, plant materials, etc., in beautifying the home surroundings.

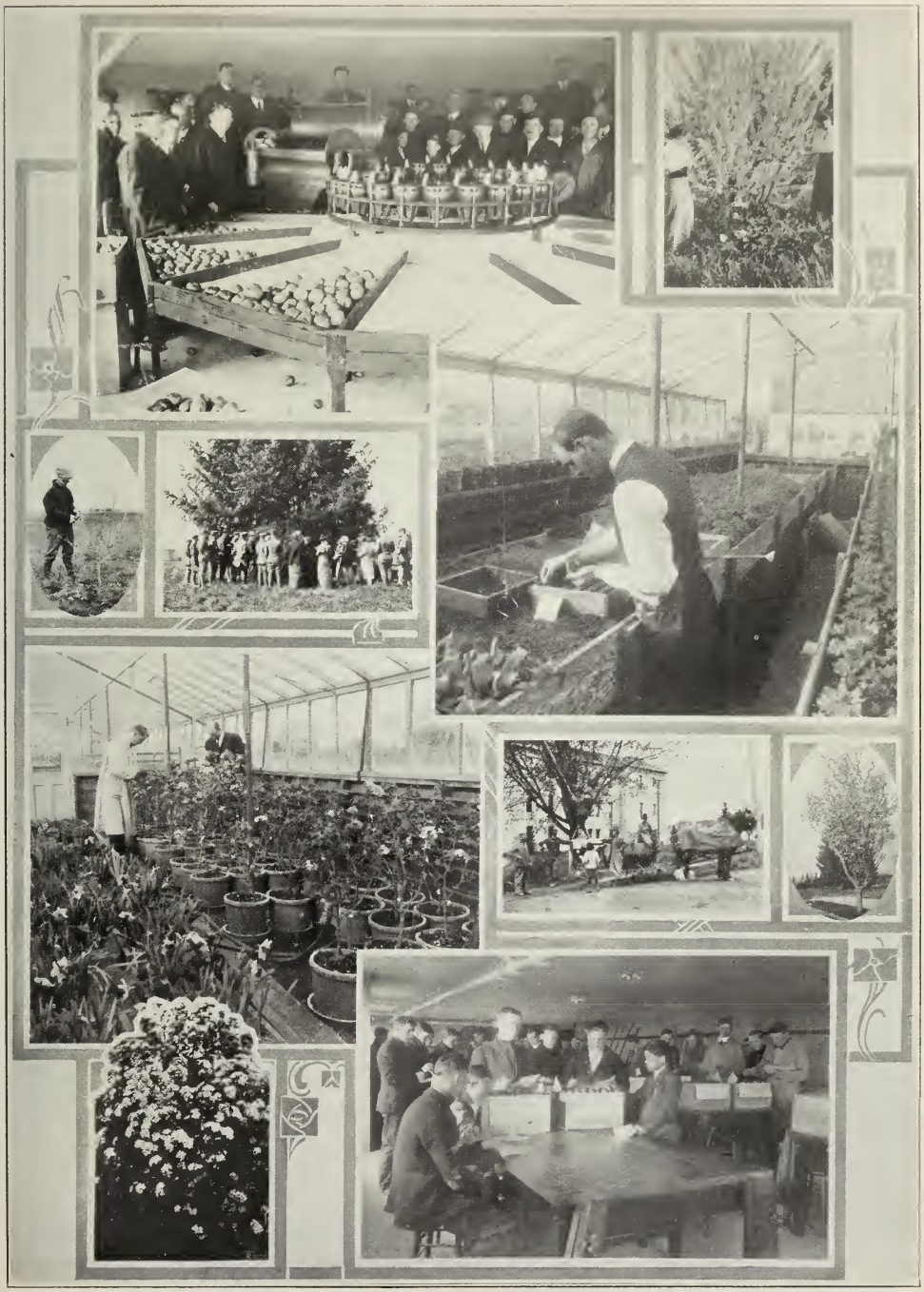
By-Products. This course has to do with giving the student training along the lines of canning, vinegar manufacture, and evaporation of fruits.

Research. Under research, are offered four or five special courses for those seniors, and, more especially, those advanced students, who wish to go into professional training, such as is offered by positions in the United States Department of Agriculture or the special agricultural college and experiment stations.

Students graduating from these various courses in horticulture are fitted for a wide range of positions. Some of these positions, open to our graduates, or already occupied by former graduates, are the following:

Orchard superintendents or foremen; cannery or by-product secretaries; cannery field experts, men who spend their time with the farmers keeping track of the condition of the crop, giving general advice to the farmers as well as to the manager of the cannery, and keeping in touch with the general conditions; school garden supervisors; superintendent of vegetable gardens, greenhouses, nurseries; fruit marketing association work, selling agencies, etc.; county agents, or district horticultural experts; high school teachers; positions with horticultural papers; positions with seed and fertilizer houses; positions with spray supply houses; florists and landscape gardeners; superintendents of parks; experts of the United States Department of Agriculture and state experiment stations.

The courses in Horticulture are of such a nature that the young men going into these professions will not only be able to get a safe start, but will be able, by consistent application, to fit themselves as experts. The ascendant position of horticulture in the Pacific Northwest, moreover, makes the field an attractive and progressive one for any ambitious youth.



HORTICULTURE

Poultry Husbandry

To meet the demands of young men who desire to give special attention to the poultry industry after leaving college, a department of Poultry Husbandry was established. For its use in instruction and experimental work, the department has two poultry plants equipped with the necessary houses, yards and appliances. About a thousand fowls of different breeds are kept. A two-story laboratory building with basement has been equipped for student use. It consists of demonstration and lecture rooms, carpenter shop, incubator, fattening, and feed rooms. In addition to the laboratory building, there are other buildings, such as incubator house, brooder house, and feed storage houses.

There are twelve courses of study arranged for the student in poultry keeping. Should he desire information upon the fundamentals of poultry keeping and feel that but a year's time can be spent in study, he may elect a course arranged in such a way as to give him the greatest amount of information and practice in the year's work. Should he desire to specialize in poultry keeping and fit himself as a teacher or investigator, a degree course covering four years of study has been arranged. Other courses have been prepared to meet the demands of those who are specializing in other branches of agriculture but desire to keep fowls as a branch of their farms.

Poultry keeping is a part of every well regulated system of diversified farming, and also offers opportunities for profit-making as a special business under special conditions. Having completed the various courses offered by the Agricultural College and the requirements of the Poultry department, the student will find several branches of the industry in which he may engage. If he is of an investigative turn of mind, he will find opportunities in government and state experiment stations. In both colleges and high schools he will find an ever increasing demand for teachers of poultry husbandry. As a business, he knows that poultry keeping may be carried on successfully, provided the one undertaking it has had sufficient training and practice.

C543—291 eggs in a year

C521—303 eggs in a year

"The Oregon Station's Triumph"—*Colliers Weekly*


O.A.C. Worlds Champion Layers
C 543-
C 521-

THE FRONT CAMPUS AND THE CASCADES, LOOKI

THE WEST SIDE OF THE EAST QUADRANGLE, LOOKING WEST FRO

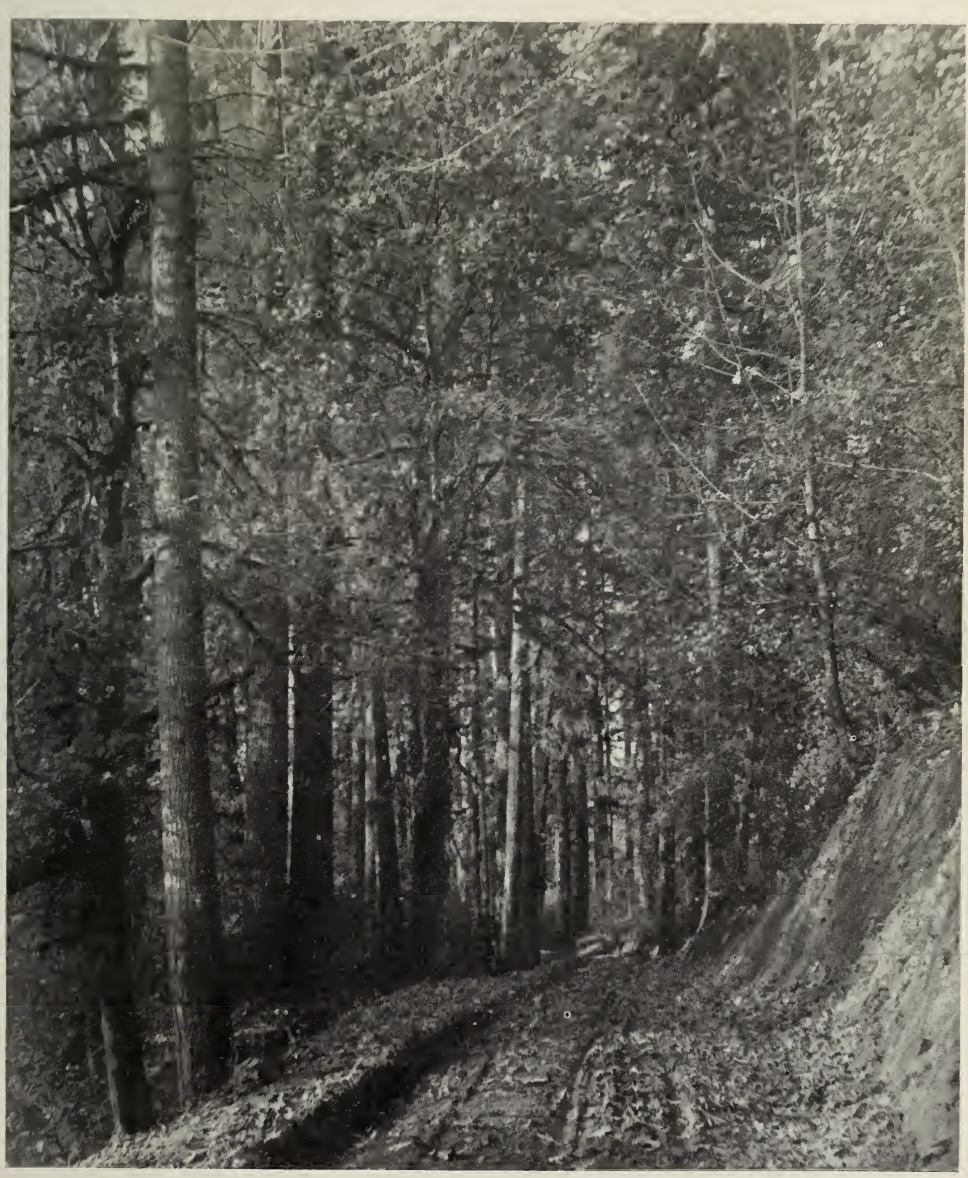
These pictures are but a distant approach to an adequate representation of the scenic beauty of the outlook to the east and the w
snow-capped peaks of Mount Hood, Mount Jefferson and the Three Sisters clearly discernible bel

EAST FROM AGRICULTURAL HALL. AUTUMN.

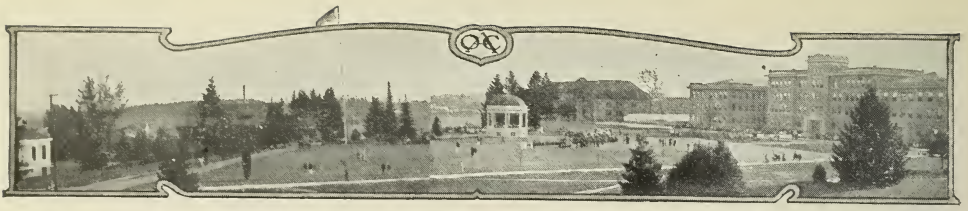
'HE MINES BUILDING TOWARD THE COAST RANGE. SPRING.

om the College campus. On clear days, both in Summer and in Winter, the view of the Cascades, with the resplendent
the blue bulk of the foot-hills, is one of the finest to be seen from any American campus.

MARY'S PEAK, FROM DIFFERENT POINTS OF VIEW NEAR THE COLLEGE.



ROAD TO MARY'S PEAK.



Bacteriology

The youth has a vision of the life he would like to live, of the service he would choose to render, of the power he would prefer to exercise; and for fifty years he pursues this vision. In almost all great men the leading idea of the life is caught early, or a principle or thesis comes to mind during youth which the entire adult life is too short to develop thoroughly.—President Charles W. Eliot, in Education for Efficiency.

There is no science which articulates more closely with different phases of life than bacteriology. This is especially noteworthy in view of the fact that the science of bacteriology has made almost all of its growth during the last 35 years. Since it is now recognized that nearly all diseases both of men and of lower animals have for their cause bacteria or other minute organisms, it is evident that to the physician, the animal pathologist, and the veterinarian, training in bacteriology is a necessary qualification. Since a great portion of plant diseases also are now known to be of bacterial origin, it follows that the plant pathologist, who is so necessary to the great interests of modern horticulture, should be well versed in the principles of bacteriolgy.

The engineering sciences, in their most efficient development, are also dependent upon bacteriology;—in mining and forestry, for the sanitary safety of mines, mills, and camps; in civil engineering, for the safe handling and distribution of commodities subject to contamination; and in sanitary engineering, for the efficient performance of all professional functions, which are little more than applied bacteriology and chemistry.

The expert chemist, too, must know, through a study of bacteriology, how to determine the purity and healthfulness of food and food products. The modern entomologist, moreover, must know much of disease producing bacteria, since investigation has shown that many diseases are transmitted from host to host through the life activities of many of our common insects.

Even the farmer, the housewife, and the teacher would each benefit by a thorough acquaintance with the science of bacteriology;—the farmer, for the good of his soils, his family water-supply, his dairying activities; the housewife, for the good of her art in the preparation of food and in promoting the health of her family; the teacher, for the strengthening of her leadership in the community, as an apostle of community betterment in matters of sanitation, health, and social integrity.

Thus the courses in Bacteriology articulate with practically all departments of the College. Students especially trained in this department are fitted, however, for particular fields of effort.

Probably the widest and most important field of this work at present is in the various state experiment stations. The bacteriologist in the experiment station is being called upon more and more for explanations concerning soil fertility which were formerly supposed to pertain to the field of the chemist or the physicist. Nor is the field of this science in the experiment stations limited to soil bacteriology only. Some of its most important work is done in dairy bacteriology; while probably the next most important branch of the science is that dealing with pathogenic forms, diseases of plants and animals.

A competent bacteriologist, who has also had certain chemical training, is admirably fitted for such work as that of health inspector, dairy inspector, etc.

The trained bacteriologist, in short, is being demanded more and more. Certain corporations engaged in the business of putting up food products; the canneries; the creameries; manufacturers of disinfectants and deodorizers; and the manufacturers of vinegar and other by-products, if they wish to supply the best products to their consumers, all have in their service men who are primarily bacteriologists.

BACTERIOLOGY.

Botany and Plant Pathology

Agriculture and other similar subjects in the elementary and high schools should not be "purely pedagogic", but should have the greatest possible vocational or utility value. The old education was for the few—the church, the government, the aristocracy. The new education, represented by the land-grant colleges, is for the masses. These institutions stand for equality of educational opportunity—for a union of learning and labor, the application of science in industry.—President W. J. Kerr.

The greatest scientists, philosophers, artists, and poets of the world in all ages have been ready to bear testimony to the debt they have owed to outdoor observations. No man is liberally educated who does not know as much about nature as he does about books. The school of the woods and hills, fields and streams, is that from which our greatest thinkers have been graduated.—Maurice Thompson.

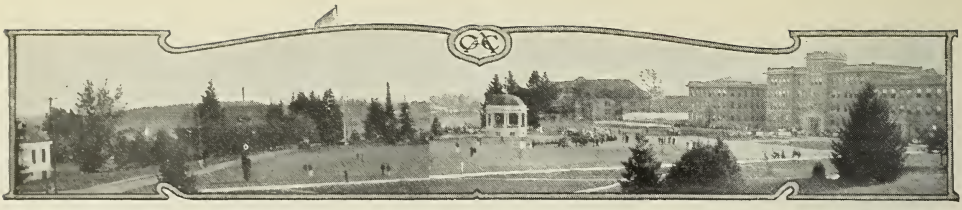
Botany and Plant Pathology is a type of department in the School of Agriculture which is devoted primarily to the fundamental sciences rather than to the immediately practical industries. It helps to provide the scientific knowledge regarding plant life that is indispensable to most of the other departments of the School and the College generally.

Its work, aside from extension activities, is largely in the class room and the laboratory, supplemented by frequent studies and experiments in the field. The principles of botany, including the evolution of plants, their relation to their environment, their use in nature and in art, and their economic significance; forest botany; agricultural botany; commercial botany; pharmaceutical botany; diseases of tree and small fruits, and diseases of vegetables, together with various advanced technical studies, are among the courses offered by the department.

Students trained in this department may become experts in various fields. By combining special work in this department with work in such other departments as horticulture and entomology, the fields are still further widened. Among them, are such fields of scientific effort as the following: plant pathologist in college or station work; seed expert in either research or commercial establishments; fruit inspector in particular regions; county agent in specialized sections; forest botanist; plant physiologist; pharmaceutical botanist; expert in weed eradication; teacher in high school or technical school.

This subject, like horticulture, is fraught with exceptional promise in a section of the country where trees and plants are so abundant and so varied, and where so much of the community's wealth is dependent upon them. The possibility of new discoveries, moreover, in research work that is constantly meeting new problems, is a peculiar incentive in this work. Through the effort to suppress or curtail disease and to combat the menace of injurious insects; through the development of disease-resistant varieties or races of plants; through the physiological studies of germination, and of frost and winter injury; through the study of the nature of spray injury; and through the study of the relation of algae and fungi to the pollution of water supplies—to specify only the principal fields of investigation—the student finds a stimulating arena for the exercise of those qualities of initiative, organization, acute observation, and audacious reasoning which characterize the scientific investigator.

BOTANY AND PLANT PATHOLOGY.



Entomology

There are lands where too many sons follow their fathers' footsteps; but our free America is not one of them.—J. Adams Puffer, in Vocational Guidance.

It is to be hoped that the constructive work and the study of industry in the elementary school will ultimately be of such a character that when the pupil reaches the age at which the activities of adult life make their appeal, he will be able to make a wise choice in reference to them and be already advanced in an appreciable measure toward the goal of his special vocation.—Committee of the National Education Association.

Whoever first does throw into system the results of thirty years of his own experience, and teach the arts, methods, and science of best husbanding and cultivating, and of most quickly and vividly using, intellectual power, whether of the meanest or finest quality, will earn the gratitude of the meanest and finest minds together, and a claim to a share in whatever good they may ever work for mankind.—E. E. Hale.

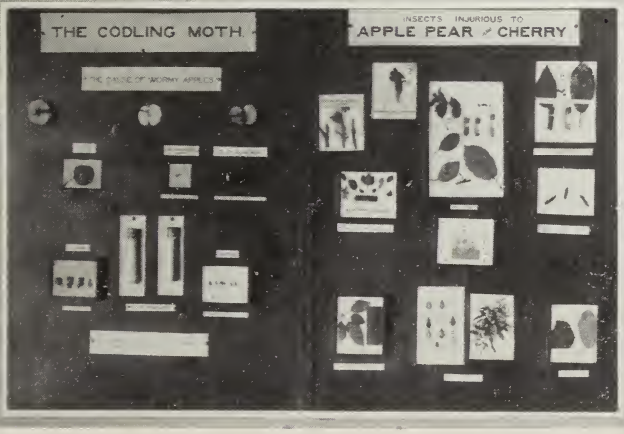
The department of entomology aims to give to all its students sufficient training to enable them to identify the common insect pests, understand their habits and life-histories, and to apply the most approved methods for their control. It aims to give to advanced students, specializing in entomology, such acquaintance with the biology of the principal families of insects, their life-histories and habits, as will enable the students to carry on independent investigations; and such acquaintance with the arts of collecting, rearing, and mounting insects, together with such familiarity with entomological methods and literature, as will enable them to preserve the records and results of these investigations and make them of service to science and industry.

Opportunity is offered, of course, for study in particular fields for the benefit of students in horticulture, agronomy, forestry, etc. Students in horticulture, for instance, take the work designed for the protection of horticultural crops. Students in home economics or pharmacy, study the effects of certain drugs and chemicals on insects, with a view either to health, sanitation, or vermin extermination. Students in agronomy seek to protect the crop resources, and students in forestry the timber resources of the country, from the ravages of insects, or diseases in which insects act as a cause or an agent.

Entomology, in this respect, is chiefly a service department— giving instruction for the rounding out of work in other departments. It articulates its courses with those in other departments to the end of greater efficiency and practical utility in both the serving and the served department.

The field of research is one in which the department has done constructive service for science, and is still doing creative work of importance. Some of its present researches are with the scolited beetle of Douglas fir, with the spider mites injurious to crops, and with parasitic and predacious insects of other animals. This is a field that has acute fascination for the mind adapted to minute investigation.

The vocations open to students who have specialized in entomology, while few in number within this particular field, are highly desirable, including positions for teachers in technical schools and colleges, research workers in agricultural stations and government projects, and horticultural inspectors. The latter, of course, would require coordinate specialization in horticulture, and by combinations such as this, including agronomy and forestry, the vocations open to entomology specialists are greatly enlarged.


THE CODLING MOTH
INSECTS INJURIOUS TO
APPLE PEAR CHERRY

Zoology

We have admirable trade schools and practical courses, but their number is not yet the tenth part of what it should be. Actually, in certain ways, a negro boy or girl in the South, who enters an industrial school, or a delinquent youth sentenced to a reform school in the North, has a better opportunity for a sound, practical education that shall help him to earn his bread and butter and to become a useful member of his community than has the child who comes up through our public schools.—J. Adams Puffer, in Vocational Guidance.

If a father wishes to give his son a legacy that will endure for life, let him send him to an institution where he can obtain a general, practical business education, and he will have the satisfaction of knowing that he has given him that which is better than houses, lands, farms, or even gold and silver.—Horace Mann.

Young man, qualify yourself for business. The professions are full, and the age demands it. Educate yourself for business.—Henry Clay.

The department of Zoology exists primarily in order to prepare students to appreciate the scientific importance of the work required in the various special or vocational departments of the Institution. It aims to develop an interest in the study of native birds, insects, and animals; their relations to the plant world, to each other, and to man's welfare. The work is adapted so far as possible to the needs of students in Agriculture, Forestry, Pharmacy, and Domestic Science and Art. The capacity of the department to serve the institution and the state, however, is not limited to these opportunities. It has its own exclusive field of effort.

Of the salaried positions open to trained zoologists, as such, those in the teaching profession are perhaps the most numerous and accessible. The demand for nature study in the grades and for biological science in the high schools and colleges is rapidly increasing, and the economic interests of the state demand that at least one person to whom the people may look for authority on biological questions should be lodged in every community. No one, by virtue of his position, is better fitted for this work than the school teacher.

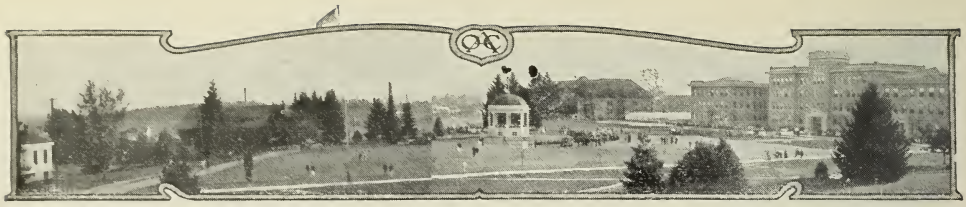
But the field is wider than this. Other problems, arising with the development of civilization, are demanding the attention of the expert. The soaring prices of meat and other food stuffs are forcing the people to look around for undeveloped sources of food supply. They look to the zoologist, and his reply is read in the numerous fish-cultural, sea-farming, and game propagations now on foot in this and other states. Such propaganda require the direction and cooperation of trained zoologists to solve the difficulties lying in the way of success.

The passage of the McLean migratory bird law, moreover, requires the assistance of some three hundred men for federal service. The positions open are such as district inspectors, assistant inspectors, and wardens; reservation inspectors and assistants for the propagation of wild birds and beasts.

The tendency toward the development of the fur-farming industries, also opens up new fields for the practical application of the knowledge of animal life.

These, then, are some of the fields, though not all, open to the trained zoologist. Certain of them are limited as to the number of positions opening up, but industrial zoology is a comprehensive science and awaits only the initiative force of qualified minds to develop it.

ZOOLOGY.



School of Engineering

These colleges were not established or endowed for the sole purpose of teaching agriculture. It was never intended to force the boys of farmers going into these institutions so to study that they should all come out farmers. It was merely intended to give them an opportunity to do so, and to do so with advantage if they saw fit. Not manual but intellectual instruction was the paramount object.—Senator Justin Smith Morrill.

To accomplish the desired reformation in our school system, there must be a general change of attitude toward education. We must abandon the old ideal of an educational ladder to the college or university. We should hold out to the average boy less hope of his attaining to the governorship of his state, or the presidency of the United States. Greater importance should be attached to the development of an ambition to excel in the industrial occupations in which more than ninety per cent of the people must inevitably spend their lives.—President W. J. Kerr.

All this means that America, while it is America and because it is America, needs all the time new men and young men. It needs that these young men shall be ready.—E. E. Hale.

The School of Engineering occupies a field that appeals with peculiar charm to youths of constructive temperament and imaginative vision. Not all youths, however, contemplating the work of an engineer who throws across a mountain canyon a massive piece of masonry and steel, or who supervises the dredging of a sea-coast harbor, or the establishment of a light-house, appreciate the tenth part of the severe discipline in mathematics and clerical drill that lies behind these splendid out-door achievements. Nor do they even dream of the physical obstacles and catastrophes that lie in wait for such a noble enterprise. Hence it is, that so many youths, caught by the meretricious glamor of short-cut engineering schools, come at length to a tragic realization of their unfitness for a broad but exacting calling.

Realizing this fact, the authorities of the School of Engineering of the Oregon Agricultural College, have striven for a substantial, adequate, and severely competent course of instruction for all departments of the school. Under this sort of discipline, the integrity of the school has been steadily maintained, and the ultimate success of its graduates has not only been assured, but abundantly realized.

Oregon is only at the beginning of a remarkable material and civic development. Virgin mineral and building resources, varied and abundant, are still to be put on the market. Forests, unrivalled in magnitude and quality, are to be made of highest service to man. Water power of incalculable energy, is yet to be harnessed. Vast areas of land are still to be penetrated by highways and railroads. Immense tracts of land are thirsting for irrigation. Counties are to be organized, towns and cities to be built, and factories to be established. Thus in various ways engineering science will be necessary in this evolution of a magnificent commonwealth.

EXPERIMENTAL ENGINEERING.

Mechanical Engineering

How long before we shall be able to rid ourselves of the sophistry that a subject to be educational, or to have cultural value, must be purely theoretical; that there can be no possible relation between mind training and industry, between science and the applications of science? If there be one thing above another demanded by the new education, it is that there shall be a union of labor and learning.—President W. J. Kerr

Hence the necessity of modifying the courses of study so that the work at every point will be of greatest possible value to all the people, regardless of the length of time spent in school. This can be accomplished only by introducing industrial subjects into both the elementary and high schools, not for mental discipline alone, but for their vocational value. And this is now generally recognized. It is advocated by the press, and by the leading educational and commercial organizations. Its importance is appreciated more and more by the people.—President W. J. Kerr.

With us the lines of promotion are open. In that is the secret of our successes. To keep them open is the first duty of our self-preservation. Because they are open, and as long as they are kept open, with us THE LEADERS LEAD.—E. E. Hale.

That sort of willingness to intrust important duty to men in young life has never died out of the country.—E. E. Hale.

(a) The work offered in the department of Mechanical Engineering consists in a thorough fundamental training in mathematics, physics, mechanical drawing, and shopwork, together with such specialized technical work as machine design, steam and gas engineering, power plant testing and design, study of the steam engine, steam turbine, gas and oil engines, refrigerating machinery, and heating and ventilating.

(b) It is the function of the mechanical engineer to develop and operate power plants, particularly where water, steam, or gas are to be utilized as prime sources of energy; to plan and direct manufacturing enterprises of all kinds, such as the manufacture of iron, steel, paper, lumber, textile fabrics, as well as all kinds of machinery and finished commercial products. His work also includes the design, construction, and operation of all kinds of machinery; the invention of labor saving devices to cheapen and standardize the product of factories.

The mechanical engineer is often called upon to consider the financial side of his profession so far as it relates to cost of labor and economical maintenance of plant. Hence he should have a broad knowledge of the world and of men.

Students entering this course should have, in addition to a thorough high school preparation, a love for mathematics and physics. While in college, they should take some work in economics and political science.

The young and inexperienced engineer usually enters professional service through the drafting room or shop, where he must earn promotion by rendering prompt and efficient service to his employer.

MECHANICAL ENGINEERING—SHOPS.

Electrical Engineering

It is for you to find the eternal law of this universe, and to put yourself in harmony with that law.—E. E. Hale.

Training for power of work and service should be the prime object of education throughout life, no matter in what line the trained powers of the individual may lie.—President Charles W. Eliot, in Education for Efficiency.

The curriculum in electrical engineering at the Oregon Agricultural College, like that in other high-class technical institutions throughout the country, is in spirit much more closely allied to that of liberal arts courses than perhaps most people realize. This situation is brought about by several conditions. The first condition is this: The field of electrical engineering is subdivided into a number of highly specialized branches—railways, telephone-telegraph, generation, transmission and distribution of power, illumination, and the design and manufacture of equipment for all these purposes. The second condition is this: The profession of electrical engineering is well filled; so that available positions in any one field are few, and not always easy to obtain, with the result that the engineering graduate generally takes his choice of positions offered, without attempting to be guided too closely by preconceived ideas of a chosen line of work. Many students elect to serve a year or more as apprentices to large corporations, deferring until the end of that period the final selection of the special line of activity.

Because of lack of time, moreover, and because it is impossible under college conditions to simulate those of actual practice, it is not possible, within four years, to train a man to be a specialist in any one of these fields.

It is obviously impossible in a college laboratory, for instance, to duplicate conditions in a power plant handling thousands of horse power. It is equally impossible, moreover, to provide, in the formal work in College, one of the most important phases of practical activity, that of handling bodies of men.

For these reasons, the course in electrical engineering places special emphasis upon fundamental subjects, the mastery of which enables a man in practice rapidly to acquire the necessary specific information in his particular field. For instance, instruction is given in shop work, but not for the purpose of turning out expert mechanics. The purpose of drafting is not to make a man an expert draftsman, but, beyond giving him some facility in the handling of drafting instruments, to teach him how to read and interpret drawings. The rest of the time is spent chiefly on mathematics, sciences, and their closely applied branches—hydraulics, mechanics, thermo-dynamics, and the characteristic performance of electrical and mechanical machinery. The result is that the man who has faithfully devoted his energies to the work is equipped to go ahead in any branch of electrical engineering, in which by fortune he may be thrown, and stands an even chance with his comrades in a competitive race for the responsible positions to which all aspire.

Though graduates of electrical engineering, therefore, are not as a rule definitely fitted for any one specialty, their widest single field of use˜ulness appears to be as testmen in the shops of the largest manufacturing companies, wherein their college experience is utilized to the best advantage.

ELECTRICAL ENGINEERING.

Civil Engineering

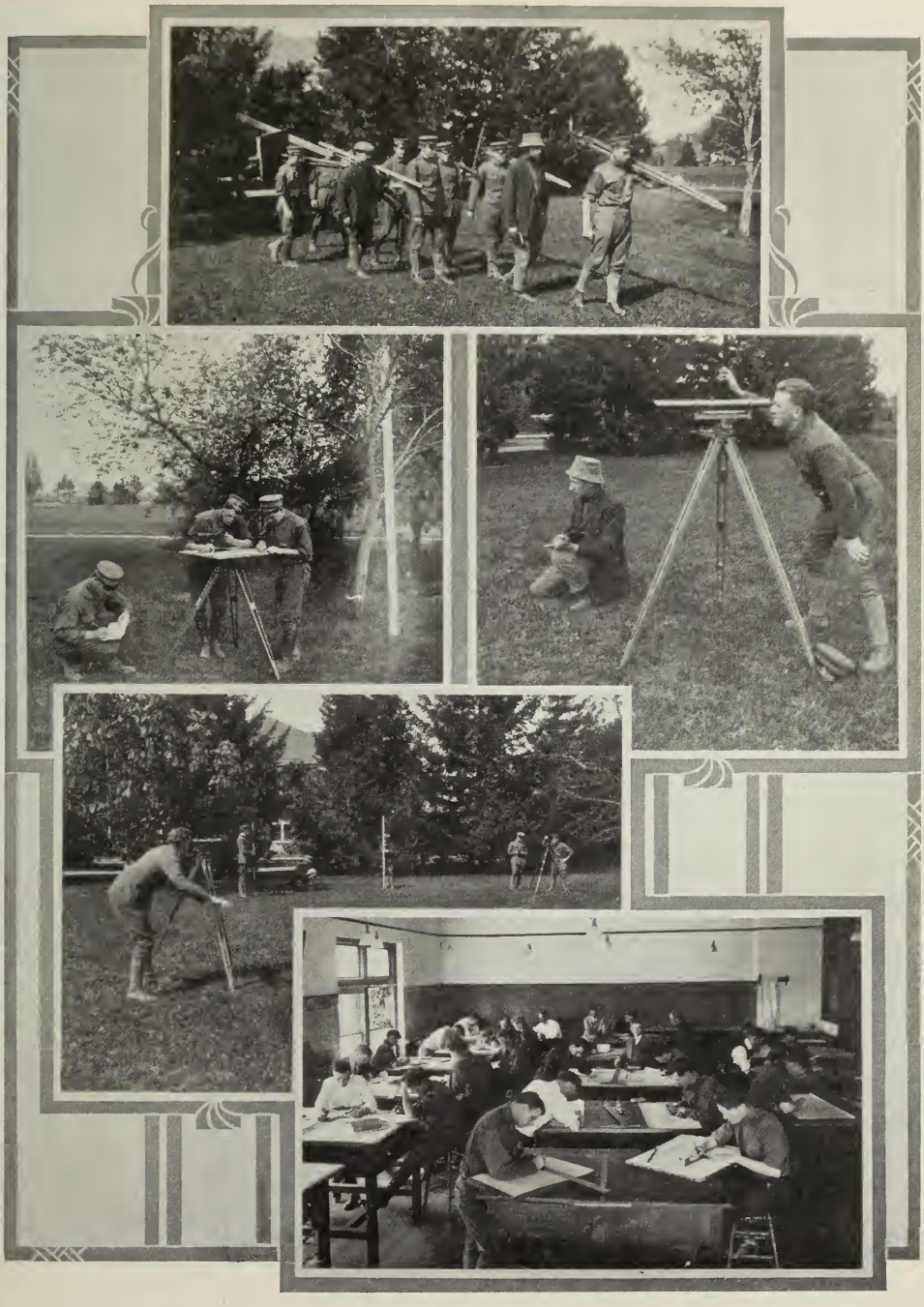
The department of Civil Engineering has been offering courses of instruction dealing with mechanical drawing, surveying, rural engineering; city, railway, and sanitary engineering; highway engineering; irrigation engineering; water supply and hydraulic engineering; masonry and foundations; roads and bridges; structural engineering; re-enforced concrete; contracts and specifications. After this year freshman work in Civil engineering will be discontinued. Work in Highway engineering and Irrigation engineering will be continued, however, and Chemical engineering will be added. All three courses, which under the new arrangement of the curriculum lead to baccalaureate degrees, will be given more complete and thorough treatment.

The instruction aims to approach conditions as they exist in the practical field of engineering. Students are regularly engaged at certain periods of the course, in actual surveying. They are given practice in tile drainage, for instance, concrete foundations, road building, land leveling, and similar engineering activities. They go on extended excursions, under competent direction, to observe important engineering work in process of construction throughout the state.

The student, under such discipline, even before he graduates, is capable of doing certain specific engineering work of no mean character. After the first year, he is able to do ordinary farm and area surveying, run in drain ditches, establish simple grades for walks, roads, etc. At the end of the second year, he is able to make complete surveys and maps of tracts of land, locating all topographic features, as well as taking levels over the entire area for the plotting of contour lines. He is generally able to figure out curves, earthworks, etc., for railroad surveys, and to run instruments for these tasks. He is thus qualified to take such a position as instrument man in government land division surveys, or in city surveys, or as draftsman in an engineering office.

At the end of his senior year he is ready for the gauging of streams to determine the quantity of water, and for estimating the storage capacity of reservoirs. He is ready to determine the amount of water from water-sheds, and the quantity of water available from ground water supplies, such as artesian wells, springs, etc. He is able to design pipe lines for water under pressure, and to compute the distribution of water for fire protection in cities, as well as to make preliminary estimates for the cost of pumping plants. And so on, for concrete work, structures, and bridge design.

THE BANNER COMPANY.



CIVIL ENGINEERING.

School of Home Economics

The School of Home Economics, which includes the departments of domestic science and domestic art, is now provided with new quarters in the east wing of the Home Economics Building, a structure just completed in the west quadrangle. The building is modern in every respect and thoroughly adapted to the uses for which it is intended. The equipment is as good as can be obtained, and the work will therefore be carried on under very fortunate conditions. Almost 400 young women have availed themselves during this year of the opportunities offered in this work.

Women are today especially trained for their life work. Specialization is demanded in all fields of endeavor; and the need is quite as great that women should be expert home makers as that farmers or engineers should be prepared for their life work.

Great economic changes affect women as well as men and that they may be able to adjust themselves to these new demands necessitates special education with that end in view. The women at the Agricultural College are not only taught thoroughly the dextrous accomplishments of the ordinary duties of cooking, sewing, and house care, but are also instructed in buying and in the economical use of materials.

Their scientific training is broad and thorough, for women must know "why" as well as "how." With the realization that women have great community responsibilities, the College gives them liberal instruction in languages, literature, economics, and sociology.

Domestic Science

Among the courses offered by the department of Domestic Science, the following are some of the principal ones: food preparation, laundering, camp cooking, dietetics, house sanitation, household administration, and home nursing, together with advanced research in problems of household administration, and in cooking.

Many excellent positions affording liberal salaries are open to women prepared to teach Domestic Science. The subject is also being introduced into all of the city schools while many rural districts are uniting to secure teachers.

Trained women find successful careers in business. Tea rooms, lunch rooms, and catering establishments when properly run, are always paying investments for women. The young women of the College have ample opportunities to prepare to feed large numbers of people in an excellent manner. Those who can feed people well at a reasonable cost will never lack an opportunity for remunerative employment.

Domestic Art

The department of Domestic Art, like that of Domestic Science, is planned primarily to educate in the art of home-making. It aims to develop the most completely symmetrical individual for the duties of the Oregon woman of this twentieth century. Since the home is her highest sphere of effort, this is the center of all instruction in her education. But since the home is affected by all the influences that color the life-activities of the state, the woman that shapes the home is interested also in shaping the state; as she trains citizens for the state through the influence of the home, she has the right to expect the state to aid her in the making of the home and its environment. Hence her interest in politics, in civic righteousness, in educational methods, in social recreations, and above all in those occupations and utilities, those graces and accomplishments, which help to make the home the truest and most wholesome center of the life of the community.

DOMESTIC SCIENCE.

(The two lower pictures represent the old quarters.)

The distinctive courses offered are in sewing, garment making, dress making, tailoring, millinery, basketry, handwork and weaving, house construction, household decoration, textiles, and costume design. While these courses, as already indicated, are intended only for efficiency in home-making, that the housewife, because of her knowledge, skill, and enlarged ideals, may be able to perform her duties with greater ease, economy and joy, yet they afford her also, if occasion should demand, the rudiments of a vocation that may be developed into expert accomplishments.

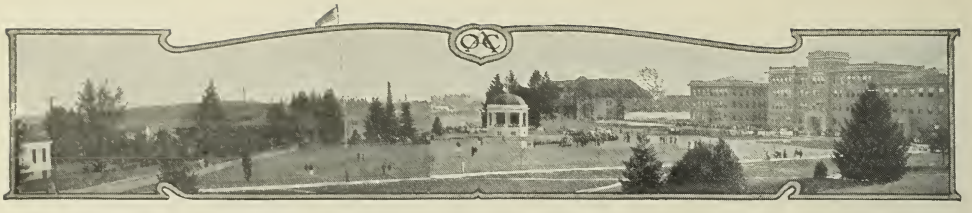
The expert needle woman, the really excellent dressmaker or milliner, the ladies' tailor, and the artist in household furnishing and decorating can always find paying positions. In public schools and colleges, moreover, there is a steady demand for trained teachers of domestic art. Such positions have been regularly occupied by graduates of the department, who have given the most efficient service.

Yes, I have a great respect for the girl who studied chemistry so that she might the better make the sugar-plums for her younger brothers and sisters. I think her chemistry was God-favored; and I have no doubt that the spirit in which she conceived her task lifted her up all along and carried her bravely through.—E. E. Hale.

It is for you to find the eternal law of this universe, and to put yourself in harmony with that law.—E. E. Hale.

Y. W. C. A. CABINET.

DOMESTIC ART. THE YOUNG LADIES MADE THEIR OWN GOWNS.



School of Forestry

In daily life we may be hewers of wood and drawers of water; but we hew and we draw with a certain divine energy, and can make the humblest duty shine.—E. E. Hale.

The work of the School of Forestry is divided into two departments—general forestry and logging engineering. In general forestry, the aim is to prepare men for active work in the Federal Forest Service, in the State Service, and in private operations.

During the freshman year the student is instructed in the principles of the conservation of our natural resources and in the importance of the forests and forest industries to the community. These matters are dealt with both from the economic and social points of view.

In the sophomore year, the student begins to receive instruction in the principles of caring for and producing forests. This work includes the growing of forest trees and the protection of the existing forests from fire and insect damage.

In the junior year, the student is initiated into the mysteries of timber cruising, log scaling, map making, and all the details which go with the measure of standing and felled timber.

The major study of the senior year includes the management of forest lands from the view point of administration. The financial aspects of forestry are considered, as well as the feasibility of applying technical methods to American forests. The students also are instructed in methods of lumbering employed in the Pacific Northwest.

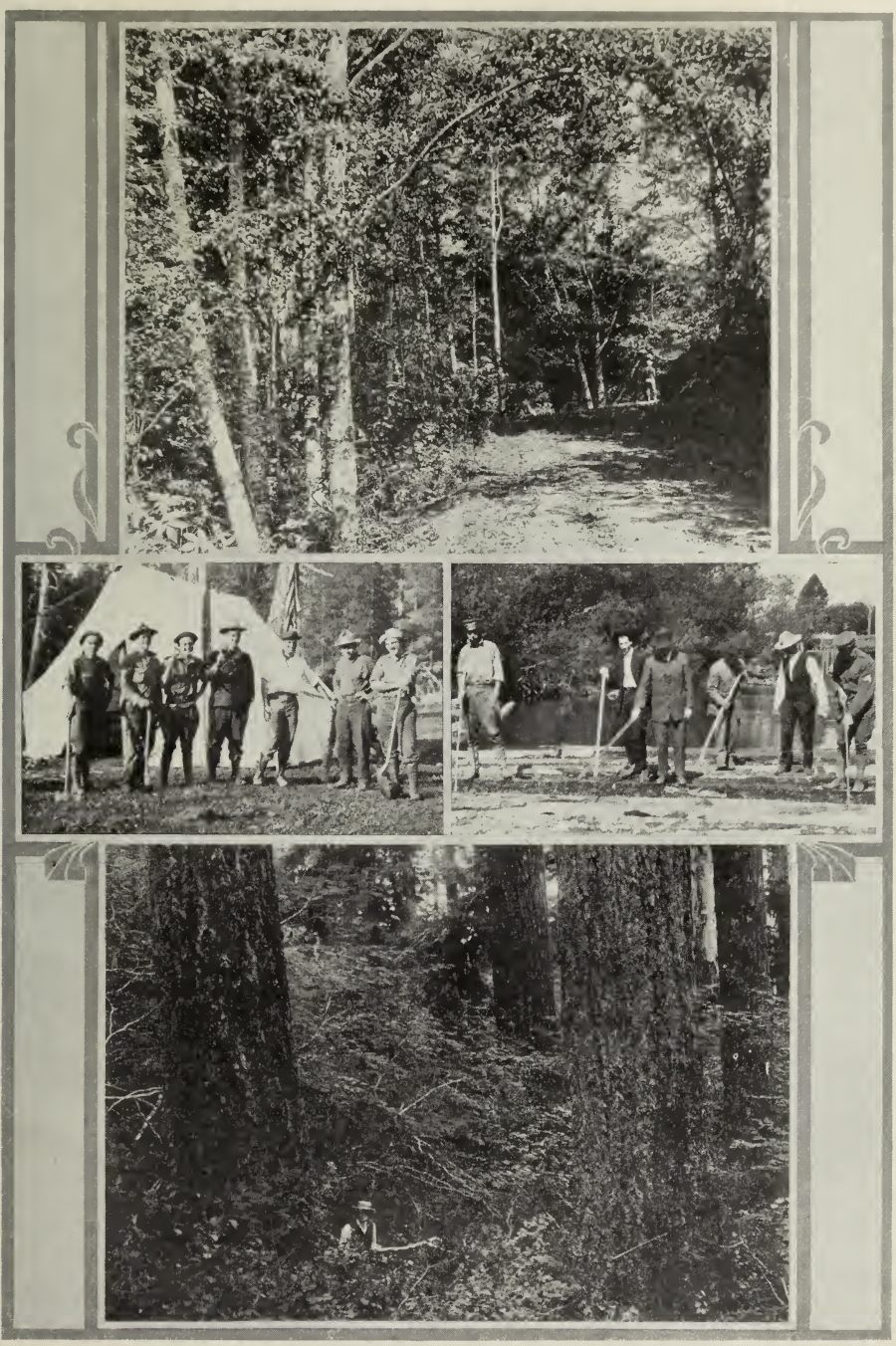
In connection with this work, they are required to make inspection of some up-to-date logging operation. The relationship of labor to logging is carefully investigated, as well as the social welfare of the men employed in the logging industry. The technical properties of timber are carefully studied and practical strength tests are made of the various kinds of commercial woods.

From the general scope of the course, it is evident that the forester is expected to be not only a man versed in the technical phases of the profession, but also a man equipped to play the part of a citizen and a leader in his community.

In logging engineering, the aim is to develop men to play a useful part in the utilization of the timber crop of the Pacific Northwest. Efficiency in operation and expenditures is the watchword. Hence the prospective logging engineer receives training in the fundamentals of surveying, mechanics, topography, the principles of steam engines, of bridge construction, railroad building and a thorough course in the application of up-to-date logging devices and equipment for the logging business.

The opportunities for men to find employment in the fields of forestry and logging engineering are better, perhaps, than in most of the other professions of long standing. Graduates of the School of Forestry are now employed in the Federal Forest Service, in State work, and by private operators. No man who has demonstrated anything like ordinary ability, has failed to secure a good position. The most intimate cooperation exists between the school of forestry and practical loggers, to the mutual benefit of both.

The foremost men in the logging business visit the College during the year and give the young men the benefit of their experience along definite lines. Not only that, but they are cooperating to the extent of furnishing employment during the summer months to young men who are studying logging engineering.



FORESTERS A-FIELD

School of Commerce

Is he a manufacturer? Let him know to the bottom the chemistry, the history, and the combination of the articles he makes. Let him some day make them better. Is he a merchant? Let him, at the end of this month, know something about his own line of goods that he did not know when the month began. Is he a man of letters? Let him fill up faster than he pumps out from the cistern.—E. E. Hale.

Stenography and Office Training. The department of Stenography and Office Training offers expert training and practical experience in Stenography, Typewriting, Office Training, and Business Letter Writing. These courses are intended primarily for three classes of students: those who are to enter the clerical positions that demand a knowledge of stenography and secretarial duties; those who expect to enter positions demanding executive ability, and those who are planning to enter the teaching profession.

One of the most important aids to any business man is a thorough knowledge of how to systematize his office procedure so that the greater part of his time may be left for the handling of more important matters. This knowledge can be secured by the students of this department in the course entitled Office Training.

Each year finds business letter writing becoming more and more important to every business. The demand for executives who are experts in business letter writing, is causing many students to specialize in this line of work. The letter writing courses offered by this department are intensely practical and of great benefit to those desiring to specialize in this field.

Business Administration. The distinctive work of the department of Business Administration is to train men and women for efficient business management. This includes thorough courses in the various phases of accounting, auditing, business organization, scientific management, advertising, and salesmanship.

Political Science. Two objectives are kept in mind as the purpose of the work of this department: to train students in the fundamentals of Business Law, and to imbue them with an interest in good citizenship. The courses in Commercial Law are not designed to develop experts in law, but to furnish students such elementary facts as will give them confidence in transacting ordinary business.

The political work of the department gives instruction in the composition of our government, national, state, and municipal, and the prominent criticisms of our systems, with proposed remedies. It deals with the duties of the citizen, and the needs of an intelligent participation in governmental affairs. It indicates possible and practical fields of endeavor in the political world, and aims to show the use and abuse of power by the citizen. The department has no intention to train politicians but to train citizens to take an intelligent part in politics.

Political Economy. The work of this department serves a threefold purpose. First, the training of citizenship. This is especially necessary in a democracy where every man and woman over twenty years of age is a voter and is called on to mold legislation directly. Second, our College is pre-eminently a vocational school. It trains specialists in all of the various branches of the applied sciences. Our courses are designed, therefore, to meet the needs of students in all departments. Third, since the College has been assigned the special task of developing the field of agricultural economics and rural sociology, it is the aim of the department to provide all instruction that may be required in this field, together with special training for the practical work of organizing farmers' cooperative associations for the more economical conduct of the business side of farming.

SCHOOL OF COMMERCE.

School of Mines

In the education of people, serious and severe training for a life work must necessarily precede all word instruction.—Pestalozzi.

The School of Mines offers work dealing with ceramics—the making of brick, tile, pottery, etc.—with building stone and road materials, with mines, mining methods, and mineral manufactures. It affords a broad and constructive training in the essentials of engineering, aside from the special training in mining. The equipment of the school, which is complete and distinctly modern, enables its instructors to present the courses in mining and ceramics with a thoroughness of application altogether adequate and practical, while the fundamental instruction in mechanical, civil, electrical, and chemical engineering, is presented in the respective departments of the School of Engineering devoted to these sciences. As a consequence of this close articulation between the schools of engineering and mining, the students in both are given a type of training far more liberal and resourceful than is possible in institutions where only mining or engineering is offered.

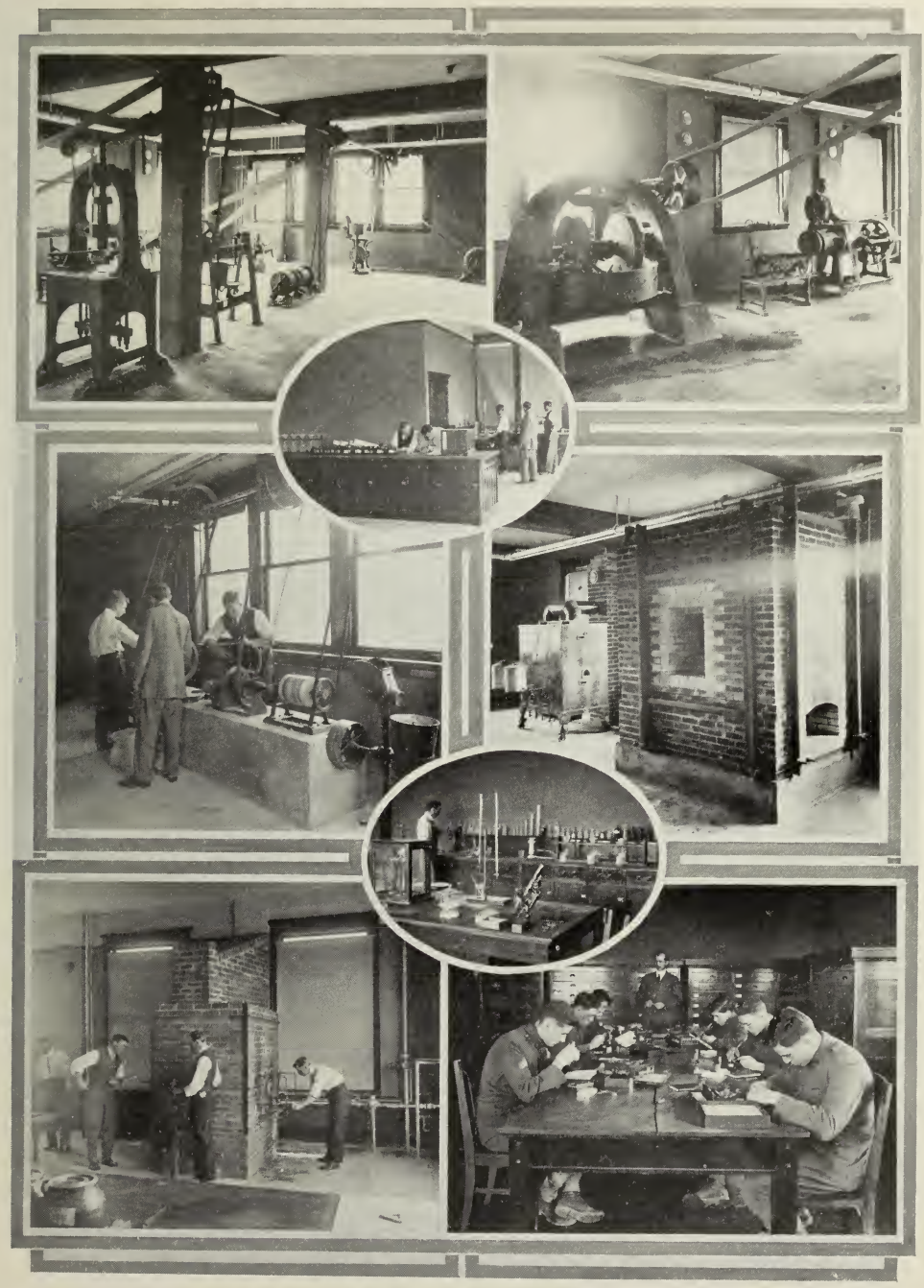
Some of the many courses offered in the school of mines are these: physiography, mineralogy, geology, geochemistry, rock and earth excavation, mining methods, mine economics, mine surveying and mining law, fire assaying, metallurgy, ceramics, glazing and cement manufacture. Field work, both during the summer vacation and at intervals during the college year, is an important feature of the course. This type of work is sometimes undertaken cooperatively with the State Bureau of Mines, located at the School of Mines.

Mining engineering, including ceramics, is a profession demanding liberal preparation for its responsible and varied duties. In order to pursue it with satisfaction, the student should have first, a strong, healthy constitution and a love of out-door activities; and second, an analytical turn of mind, with a grasp of mathematics and a decided bent for mechanical and scientific subjects. Given this, and a thorough education, he should not only find a ready and remunerative field for his life work, but a sustained and satisfying pleasure in it.

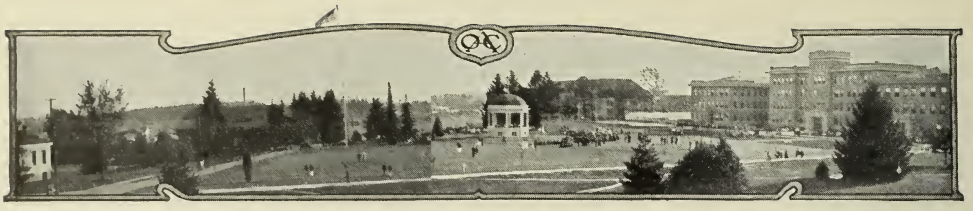
Work for the mining engineer is found in certain localities throughout the world. No country or state is without its field of opportunity. Moreover, the schools of mining are few, and the demand for the competently trained mining man is unfailing. The industry, moreover, is in its youth; is growing, not declining, and the future is accordingly bright.

Some of the life-vocations open to the graduate mining engineer are the following: assayer and chemist; deputy mineral and land surveyor; draughtsman and designer in an engineering establishment; on the geological staffs of the great railroad, mining, or exploration companies; in the mineral classification work of the Government Forest Service, or in the Geological or Coast and Geodetic Survey; in state geological surveys; in actual mining, milling, or smelting operations; or, when the requisite experience and standing have been secured, as expert consulting and examining engineer.

It is comparatively easy for a mining engineering student to secure remunerative employment immediately after graduation. This is because so many lines of work are open to him. He may find it necessary to do assaying or surveying at first, although his preference be mining geology, but he usually finds it possible to secure a more satisfactory position before long, and he is profitably employed in the meantime.



MINING ENGINEERING.



Extension Service

Oregon has taken her station gallantly in the vanguard of the movement for a democratic higher education. She has not been content simply to provide opportunity for liberal and technical education in certain centers of the state, but has enlisted her zeal and her treasure in a generous enterprise to carry the results of scientific investigation and the essence of higher education to the people in every quarter of the state.

Extension service at the Oregon Agricultural College has been established on a constructive basis, representing the most advanced policies of demonstrated success in the states of the middle west. It embodies the cooperative plan of county agricultural agents, in which the counties, the College, and the state are co-workers; and the cooperative plan of dairy promotion and advanced registry in which the College and the federal government are co-workers. It includes, also, such standard methods of work as institutes, lectures, traveling schools, field demonstrations; expert inspection, analysis, and advisory direction; cooperative orcharding and cropping; cooperative seed distribution; veterinary clinics; soil testing; analysis of water, milk, and foods; testing milk for butter-fat; sanitary campaigns; and movements for civic improvement, including landscaping, parking, fly-extermination, and engineering enterprises.

The Extension department, while not directly concerned with the instruction of students in the College, is instrumental, in large measure, in keeping senior students and graduates in touch with the needs of the state, or of particular localities, for such services as they have to offer. The department, in short, feels the pulse of the commonwealth more acutely and sympathetically than any other in the College, and responds to it as promptly and as faithfully as possible. It has been immediately instrumental, for instance, in supplying to ten counties the trained agriculturalists to serve as county agents. It has demands for such experts, both within the state and without, far beyond the present supply; and is accordingly watching, with eager scrutiny, the careers of students whose talents, training, and experience give promise of fulfilling the demands of such responsible service. Incidentally, it has been instrumental in sending many a talented graduate into the particular niche where his life career, begun with good fortune, has continued with satisfaction.

FOOTBALL TEAM, 1913.

EXTENSION SERVICE.

Pharmacy

Authorized by the Board of Regents, and founded in 1898, the department of Pharmacy had now been in successful operation for sixteen years.

Its purpose is to afford opportunities for the students of Oregon to obtain a thorough technical education, qualifying them for a life profession of pharmacy. Providing such opportunities, it is assumed, will result beneficially for the people of the state; first, by helping to satisfy the worthy ambition of Oregon youths for a life of efficient service; second, by insuring the communities of the State against the dangers of ill-trained and incompetent pharmacists.

There is always a demand for well trained men in pharmacy and its many allied fields, and it may safely be said that the opportunities were never more numerous or better than at present.

The department is constantly receiving inquiries for technically trained men for service not only in all lines of pharmaceutical work, but in those of the various sciences upon which professional pharmacy is founded.

A young man thoroughly trained in modern professional pharmacy finds open to him such positions as proprietor, manager, or prescription clerk of drug stores, as chemist or department manager in large pharmaceutical plants, as pharmacist in the army or navy, or in state, municipal, or private hospitals, as food and drug experts in government laboratories, as chemist and bacteriologist in state and municipal public health departments, as chemist for importing jobbers of drugs and groceries, and as teacher in schools of medicine and pharmacy.

That the public is beginning to appreciate the importance of skilled pharmaceutical service, is evidenced by the progress of legislation respecting the qualifications of persons entering the practice of the profession. In a number of states it has become necessary, in order to be eligible for the registration examination directed by the State Board of Pharmacy, for the candidate to possess a diploma from a recognized college of pharmacy. A law of this character has recently been enacted in Oregon.

A large faculty of experienced men, each individual a trained expert in his line, buildings of modern construction and of a design suited to the purpose, equipment so complete that it would be difficult to suggest an addition—these are the conditions which environ the student and which are conducive to work of a high order.

A GROUP OF COLLEGE ATHLETES.


A Style
Everything FRESH and NEW
Merry Xmas
Card Writing
The Finished Product
Prescription Laboratory Student Outfit
CoKe 10¢
Listerine How it is Made
Manufacture of Fluid Extract Sarsaparilla
Tablet Machine
A New Season
Kilsap Corn Cure
Kilsap Pink Pills
Perfume
PURE DRUGS
Ice Cream
DEPENDABLE SERVICE
Talcums for The little One
Leave prescriptions Here
Shop?
RUBBER

PHARMACY

Art and Architecture

Good mental and manual training under the inspiration of the life-career motive, directed toward almost any trade, is better preparation for any other than is an aimless and uninterested dabbling in a general course that points nowhere. In the mobile social and industrial life of America, even an unwise early selection is not a very serious matter, and the early-choice mistakes of the few will work less damage in the long run than the postponed-choice mistakes of the many.—J. Adams Puffer, in Vocational Guidance.

Art

If one is to attain the fullness of life he must be able to appreciate art.

Art Education in the Oregon Agricultural College does not mean the training of artists, nor does it mean simply the pursuance of courses in drawing. It means a knowledge of such art principles as will give students a better appreciation of the good work of all ages, a love of the beautiful in nature, and a fuller understanding of art in its relations to their own everyday life.

For Architectural Students, courses in drawing, pencil and pen rendering, water color rendering, composition and historic ornament are required. Advanced pencil and water color rendering are electives. For Industrial Arts Students, courses in drawing, working drawings, composition, design and color are required, while metal work and pottery are electives. The art work offered in connection with the Domestic Science and Art courses, covers work in representation, design and color, worked out by concrete problems to develop the principles and show their practical application to home needs. It aims to develop an appreciation for finer things, and open a world of beauty and refinement, that only familiarity with the best the world has, can bring about. The connection between art and the civic and commercial world is kept in mind, and toward the end of the course, electives in the various branches of applied design are offered.

In the field of art the following professions and trades are open to both men and women—architecture, teaching, supervising, interior decorating, designing, and drafting.

Architecture.

Architecture has aptly been called an applied fine art. The course in Architecture is planned for the purpose of training the student ultimately to do practical work in the design and construction of buildings. In order to permit him to follow the trend of his natural ability in this line, the course is divided at the end of the Junior year into two branches, the one taking up architectural design and the other architectural engineering.

In order to meet the demands of the day upon the practical architect, rural and domestic architecture receive a large amount of attention, and problems in the designing of residences, schools, and churches occupy the student's attention. Country homes and large establishments are also considered. Throughout the course, however, the principles of design and construction and the art of expression are the essentials which the student is made to grasp.

Upon the student's graduation, his natural ambition is to practice architecture as a profession, but many are especially talented for certain allied subjects. There is a constant demand for architectural draftsmen and superintendents, and to accept such a position is probably the most satisfactory step towards a practice in architecture. The contracting business, in any one of its many phases, also offers great possibilities on the Pacific Coast.

ART.

Physics

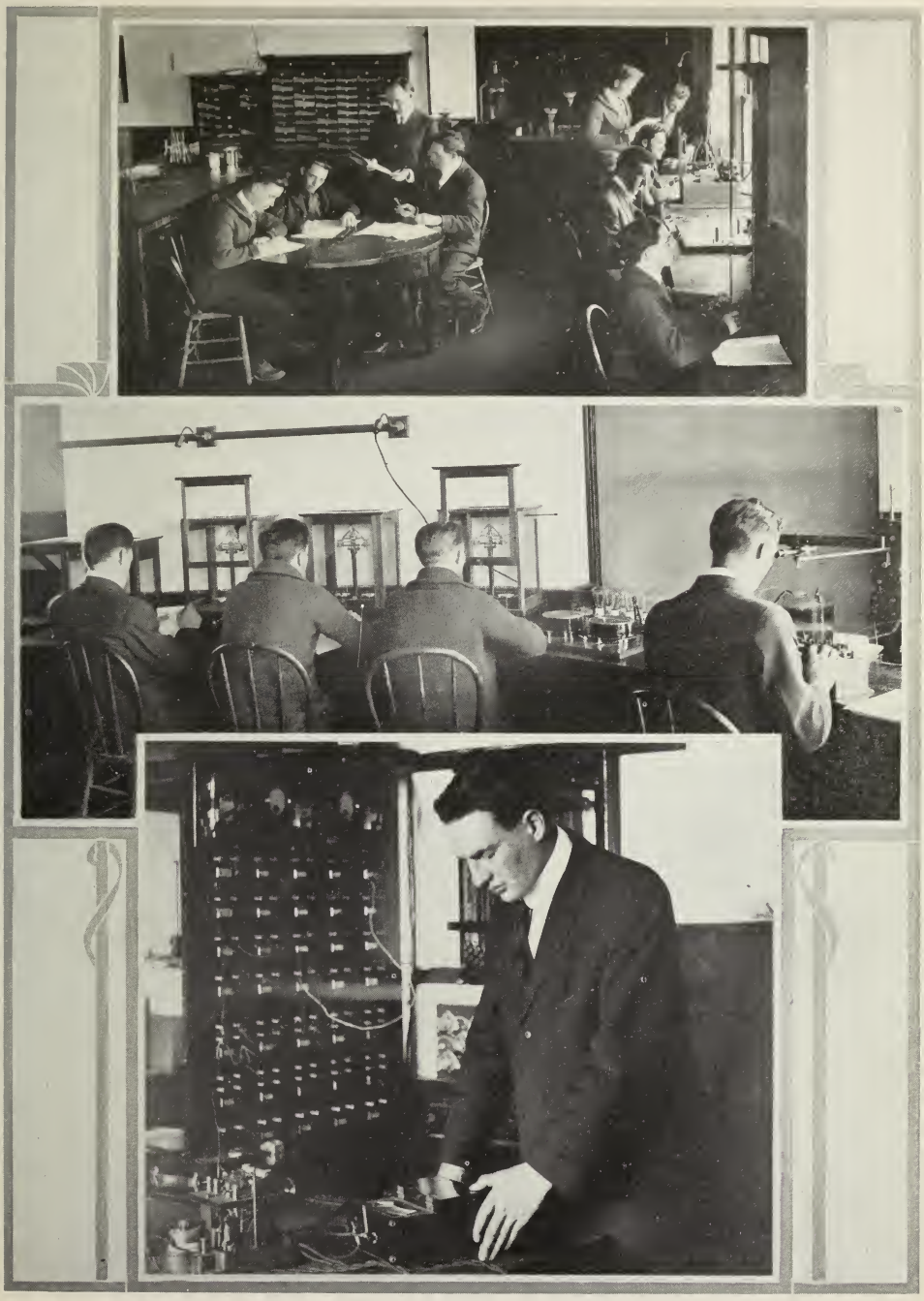
The department of Physics, like that of Chemistry, is one of the service departments of the College, providing such work as is necessary for the upbuilding of the professional and vocational schools.

The courses offered, besides the principles of general physics, are such as engineering physics; household physics, for students of Home Economics; electricity and magnetism; heat and light; illumination; and wireless telegraphy.

Still it is as true as ever, first, that all science involves a knowledge of fundamental and essential principles, and that the man who is not trained and habituated in these will be a mere dabster and empiric, even in the method of the special science which he has chosen.—E. E. Hale.

It is certain that our system attempts to keep open the lines of promotion, which he systems of the Old World generally try to close.—E. E. Hale.

CLASS IN ARCHITECTURE.



PHYSICS

Chemistry

The department of Chemistry is primarily a service department. It furnishes the basic science training for the distinctly vocational courses. It serves the School of Agriculture, for instance, by offering courses in soil chemistry, in analyzing cereals, fertilizers, waters, etc.; the department of Dairying, by analyzing cattle foods and dairy products; the department of Pharmacy, by analyzing drugs, by chemical examination of alkaloids, etc., and by instruction in physiological chemistry; the School of Home Economics, by courses in the chemistry of foods and textiles; the School of Mines, by various courses in quantitative analysis involving rocks, metals, and ores; the School of Engineering, by courses in analysis of coal, gas, oil, cement, asphalt, etc., courses in the chemistry of water, and courses in electro chemistry; and the School of Commerce, by industrial chemistry involving a practical study of the chemical processes involved in the production of such commodities as iron, steel, copper, and other metals, as well as soaps, lyes, paints and the like.

In the research laboratories of the Station Chemist, investigations are constantly carried on with a view to throw fresh light on important scientific and industrial problems. Recent investigations have evolved new and more scientifically accurate methods of determing the chemical content of hops, and have led to the detection of the injurious elements and chemical activities of lime sulfur spray. In addition to this type of research work, the Chemist's laboratories are regularly employed in routine work of examination and analysis for the benefit of the citizens of the state.

EDITORS OF THE STUDENT BAROMETER

CHEMISTRY.

Industrial Pedagogy

It is the concrete-minded, motor-minded pupils who are dropping out before the end of the eighth grade because they find themselves led nowhere that they want to go, and are being prepared for everything in general, but for nothing in particular.—J. Adams Puffer, in Vocational Guidance.

Pupils who have a definite aim (vocational) actually do a much higher grade of work than those who are drifting along the path of least resistance.—Jesse B. Davis, Principal, Grand Rapids, Mich., High School.

Even apart from the question of industrial efficiency, what shall we say of the preparation for citizenship of a school system that allows half its personnel to fall by the wayside before it finishes even its elementary work.—J. Adams Puffer, in Vocational Guidance.

Industrial Arts

Industrial Arts, a new course leading to the degree of Bachelor of Science, of the same general standard as all other B. S. courses, has been established at the College in order that young men, aspiring to teach and to supervise manual training in the public schools, may receive instruction placing them on a par with high school teachers in other branches. The supervision of industrial instruction in the elementary schools is of even greater importance to the industries of life than the direction of other subjects, long established in their methods. Youths who undertake this work, should not only be thoroughly versed in the history of the industries and their relation to economic, social, and political life, but should have a genuine conviction of the importance and dignity of their contribution to human progress.

It will be the duty of such youths to help satisfy the increasing demand of the Oregon schools for a more extended and skillfully directed training in the manual arts; for the boys, instruction in woodworking, metals, and machine shop, and vocational guidance in the grades; for the girls, several phases of home economics. Such work partakes of the constructive character of community building, and demands a sterling personality. The call for such personalities, strengthened by scientific training, is going up from scores of communities throughout the state, and the College is striving to answer the call.

Industrial Pedagogy

Industrial Pedagogy includes courses planned to fit teachers for instruction and supervision in special subjects in the public schools. These are Agriculture, Home Economics, and Commerce, together with Manual Training—already treated under Industrial Arts.

The purpose of this work is to provide that essential factor without which the industrial movement in the public schools is sure to be fatally misinterpreted and misunderstood; namely the teacher. No amount of material equipment, however elaborate or costly, can give scientific and educational significance to the newer education. This must be done by the trained mind, the energizing personality, and the devoted zeal of the teacher. Capable youths, men or women, educated in the midst of an industrial environment as ennobling as that which prevails at the State's industrial and mechanical college, ought surely to possess these qualities.

ENTRANCE TO AGRICULTURAL HALL

English

The specialist who has not laid a generous foundation for his art cannot explain it to another; cannot wisely conduct the experiments for advancing it: he can only repeat the processes to which he himself is bred.—E. E. Hale.

Certain departments of the College, though they offer no special degree, and lead directly to no specific profession or industry, are nevertheless of fundamental importance to the success of all training in the degree courses. Such a department is that of English, which affords instruction absolutely indispensable to efficiency in any vocation that partakes of the dignity of the professions. As inevitable as the law of the Medes and the Persians, is the fact that permanent success among people of capacity and culture cannot be attained without an accurate and dynamic use of the mother tongue. Any scheme of industrial training which fails to take account of this reality, is destined, sooner or later, to a tragic awakening. The arch enemies of the agricultural and industrial movement, if there are any, could devise no more subtle means for its overthrow than by the elimination of a vital training in English.

At the Oregon Agricultural College the training in English is organized into a single comprehensive department, which includes instruction in the English language and literature; in rhetoric and composition; in argumentation, public speaking, and debating, and in literary interpretation, and dramatics. The work is directed by a corps of instructors whose scholarship, experience, and artistic talent command implicit confidence and respect, and whose enthusiasm and loving spirit of service, endear them to their students.

In the collegiate courses in English, particularly in public speaking, the training is correlated with that offered in the vocational departments, in order to bring it into harmony with the industrial and technical spirit of the institution.

Library

Let a man be sure that whatever advantages he has gained in boyhood anywhere be steadily improved upon.—E. E. Hale.

Though lacking that characteristic of magnificent housing which is commonly associated with libraries in these latter days of lavish private donations for public benefit, the College library is no mean element in the working efficiency of a large industrial plant like O. A. C. An establishment with 24,000 books, 5,000 bound reports, over 32,000 bulletins and pamphlets, and 500 regular periodicals, catalogued and readily accessible, the College library is one of the dynamic centers of intellectual energy on the campus. In addition to the central library, in Administration Hall, with its reference facilities, reading room, periodical rooms, and card index facilities, department libraries, devoted to special literature, are distributed throughout the institution, where they are handled, under the direction of the department head, for the more immediate benefit of students and instructors pursuing special studies.

A liberal system of administration, involving "open shelves," both day and evening service in the reading room, liberal loan privileges, and the most efficient and obliging methods of giving assistance, together with such service as a periodical bulletin of new books, makes the library service one of the helpful and satisfying agencies for gaining an education at the College. The library, in short, is more than a store-house of information, it is the power-house of the intellectual life of the community.

FRONT OF ADMINISTRATION HALL

Mathematics

In any technical institution mathematics is one of the basic sciences. It forms the foundation for all progress in the technical phases of engineering. It is an essential to efficient work in all such sciences as chemistry, physics, and geology. It is the indispensable factor in accurate construction and scientific pattern making. It is the hand maid of commerce, and the sine qua non of architecture.

No emphasis is necessary, therefore, to indicate that mathematics at the Oregon Agricultural College is handled with breadth and decisive skill. The realization that distress and shipwreck often lie in wait for the student of engineering or farm management who gets past mathematics with only a vague acquaintance with its forms, prompts the department to a vigilance and thoroughness that insures to its students a working mastery of the fields that are covered.

History

History is another department of the College which offers no degree and leads directly to no special vocation, but which affords instruction essential to the degree courses. Aside from the fundamental courses in general history, special courses bearing upon the development of the industries, commerce, and institutions are germane to a land grant college. Constitutional and political history, because of their direct bearing upon the evolution of citizenship, are particularly necessary. The history of Oregon, a heritage which all the sons and daughters of a magnificent commonwealth are of right entitled to, is a significant element of the department's curriculum.

Modern Languages

Science, like music, is the universal language. It knows no bounds of continents or nationalities. Its devotees toil under all skies and in all climates, expressing themselves in deeds that all can understand. But when their demonstrations become matters for record, they must employ the language of a certain people, usually their mother tongue. Those that aspire to a universal hearing, prepare for this broad task by mastering the leading modern languages. Even those scientists who are ambitious to keep abreast of the newest researches in any phase of scientific study, are zealous to secure a reading knowledge of the chief modern languages, French and German especially. Aspirants for superior degrees in most of the leading colleges of the country are required to know German or French. Hence there is a general demand in the land grant colleges for courses in the modern languages that can satisfy these peculiar needs. There is a further demand, of course, less pertinent perhaps to agricultural and industrial colleges, made by those liberal minded students who are seeking a broad basis for their scholarship, who desire to know as intimately as possible the national ideals of the leading modern nations, colored with the individuality of that nation's language. There are still others, who appreciate the fact that one of the surest ways to master the mother tongue is to use it as a tool in gaining control of another language.

The Agricultural College, in its department of modern languages, offers courses of three years, in French, German, and Spanish respectively. Since the end in view is chiefly for the practical use of the various pursuits of life, the methods of teaching are thoroughly practical, combining all the theory necessary, with all the practice possible.

ENTRANCE TO THE MINES BUILDING

Music

It is not simply the training of the voice to speak; it is not simply the training of the eye to see; far less is it the training of the fingers of the hand to this service or that toil. It is that we may come unto a perfect man.—E. E. Hale.

The School of Music is a self-supporting institution, which has existed for many years at the College, lending its humanizing influence to enrich the severely technical interests that dominate the place. It is the verdurous ivy that beautifies the granite wall, the luminous flower that blossoms on the live wire of industrial energy.

In return for the accommodation afforded by the use of several rooms for studio purposes, the leaders in the School of Music give their services to the College in the training of her excellent Glee and Madrigal Clubs, in the presentation of artistic musical entertainment as a feature of all festival occasions of an official or ceremonial character, and in student recitals open to all members of the College community.

In addition, it offers to all students, for a reasonable professional fee, expert instruction in voice, piano, violin, mandolin, and guitar. It also gives band and orchestra instruction, maintaining, in the Cadet Band and the O. A. C. Orchestra, organizations of which the College is justly proud.

The leaders of the musical faculty, moreover, are active directors of the important musical organizations of the city, thus giving to the entire College community musical culture of a broad and inspiring character.

Thus, in various ways, the School of Music serves the people of the community and the state, enlarging their enjoyment and appreciation of good music, on the one hand, and on the other hand uplifting their musical accomplishments. The members of its faculty are musical performers of artistic attainments, trained under the personal direction of some of the masters of the age.

O. A. C. QUARTETTE

COLLEGE GLEE CLUB.

MADRIGAL CLUB.

ENTRANCE TO THE ARMORY

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FIFTY, JUNE, 1914

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